Environmental Assessment

Riverside Rehabilitation Project

St. Croix National Scenic Riverway

March 7, 2003

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1.0 PURPOSE AND NEED

1.1 Background

The St. Croix National Scenic Riverway (Riverway) was established in 1968 as a component of the National Wild and Scenic Rivers System and is a unit of the National Park System (NPS). The park includes 103 miles (166 km) of the St. Croix River between the Xcel Energy hydroelectric dam at St. Croix Falls, Wisconsin and the dam at Gordon Flowage and all 99 miles (159 km) of its tributary the Namekagon River in northwestern Wisconsin. The boundary of the Riverway includes the adjacent uplands averaging one-quarter mile from the shoreline. Much of the St. Croix River forms part of the border between the states of Minnesota and Wisconsin.

The park receives an estimated 500,000 visitors annually. The primary visitor use along the Riverway occurs on the water surface in the form of boating and canoeing. In 1990 approximately 14,000 visitors used trails along the Riverway for the purpose of hiking, hunting and fishing access, cross-country skiing and nature observation. Recreational use is expected to increase given the close proximity of the Riverway to Minneapolis/St. Paul, a heavily populated metropolitan area.

The National Park Service strives to balance the need for access to the rivers with the need to protect the significant values for which the St. Croix National Scenic Riverway was established. These values of significance are defined by the General Management Plan, Upper St. Croix and Namekagon Rivers (USDI 1998) as:

> "The upper riverway is significant because:
>
> - The St. Croix River is one of the last undisturbed, large floodplain rivers in the upper Mississippi River system.
> - The riverway is an unrivaled combination of exceptional natural resources and scenic, aesthetic, cultural, and recreational values in proximity to major urban population centers in the upper Midwest.
>
> Specifically, the riverway has a number of outstandingly remarkable *natural resource values*:
>
> - Ninety percent of the upper riverway retains the essential qualities of a free-flowing river in spite of the presence of several small dams and one large dam.
> - The high quality of the water of the Upper St. Croix river resulted in both Wisconsin and Minnesota designating it as "outstanding resource waters," which is the highest designation possible.
> - The St. Croix National Scenic Riverway is a protected north-south corridor that serves as a refuge for large populations of diverse flora and fauna, including federally and state-listed threatened and endangered species.
> - The St. Croix River contains the greatest diversity of mussels in the upper Mississippi River System.

In addition the riverway has numerous remarkable *scenic, aesthetic, cultural and recreational values*:

- The Upper St. Croix combines high-quality river canoeing with multiday canoe camping along 200 miles of a scenic, publicly managed and accessible, and relatively undeveloped river shoreline.
- As they travel the river, visitors can observe the convergence of three terrestrial biological communities (prairie, hardwood and warm-water communities.
- The St. Croix River has a national reputation for excellent smallmouth bass fishing and the Namekagon River for trout fishing.
- Visitors have extended opportunities to experience the solitude and beauty inherent in the riverway's exceptional natural resources.
- The St. Croix and Namekagon rivers, a traditional corridor between the Great Lakes and the Mississippi Valley, retain numerous archeological and historic resources that reflect centuries of human use of a riverine environment.

1.2 Problem Statement

There are nearly 50 landings as access points for canoes and boats along the St. Croix and Namekagon rivers including the two adjacent facilities in northern Burnett County in Blaine Township, T42N - R15W Section 33, at river mile 131.7: Riverside Landing and Riverside Wayside (Figure 1). Riverside Landing is owned and operated by the National Park Service. Across Wisconsin State Highway 35 to the east, Wisconsin Department of Transportation operates the Riverside Wayside. The Wisconsin Department of Transportation (WisDOT) has operated the site as a wayside rest since 1972 when the current facilities were constructed. WisDOT acquired the property in 1967. A third, but informal landing, just downstream, is used for trailer access and as a water site for use in fighting fires by the Wisconsin Department of Natural Resources. These facilities adversely impact the scenic and recreational resources by duplicating facilities at adjacent sites.

The wayside as constructed by WisDOT (Figures 2 and 3.) includes a canoe ramp, two paved parking areas for a total of 36 cars plus 11 slots for over-sized vehicles, paved circulation roads, vault toilets, a hand pumped well for drinking water, and a picnic area. The parking area can be seen from the river and storm water from the parking lot drains directly to the river. The asphalt canoe ramp is heavily eroded and is not available for use by trailers. It is likely the ramp was always intended for use as a canoe launch only. The site is currently used as a canoe landing and also by National Park Service staff for environmental education purposes. The shallow water at this site is excellent for the popular "Rivers Are Alive" program. Across Wisconsin Highway 35 to the east is Riverside Landing maintained by the National Park Service. Because of their strategic location, just a few miles downstream from the confluence of the Namekagon and St. Croix rivers, these adjacent sites are among the National Park Service's most heavily used put-in and take-out points.

The landing maintained by the National Park Service has a 10-15 car gravel-surfaced parking lot in full view of the highway and the river. There is a mowed grass buffer between the parking lot and the carry-in landing for canoes. The landing is a popular access point for canoe outfitters. In

addition to the landing, the National Park Service maintains two primitive campsites in association with this landing and provides a portable satellite toilet for these campsites. The campsites are within view of the highway and are not screened from highway noises. No drinking water is provided requiring visitors to cross the highway to the wayside rest where WisDOT provides water for visitors. In anticipation of NPS ownership, the hand pump was not connected in 2002 at the request of the National Park Service as it does not meet NPS standards.

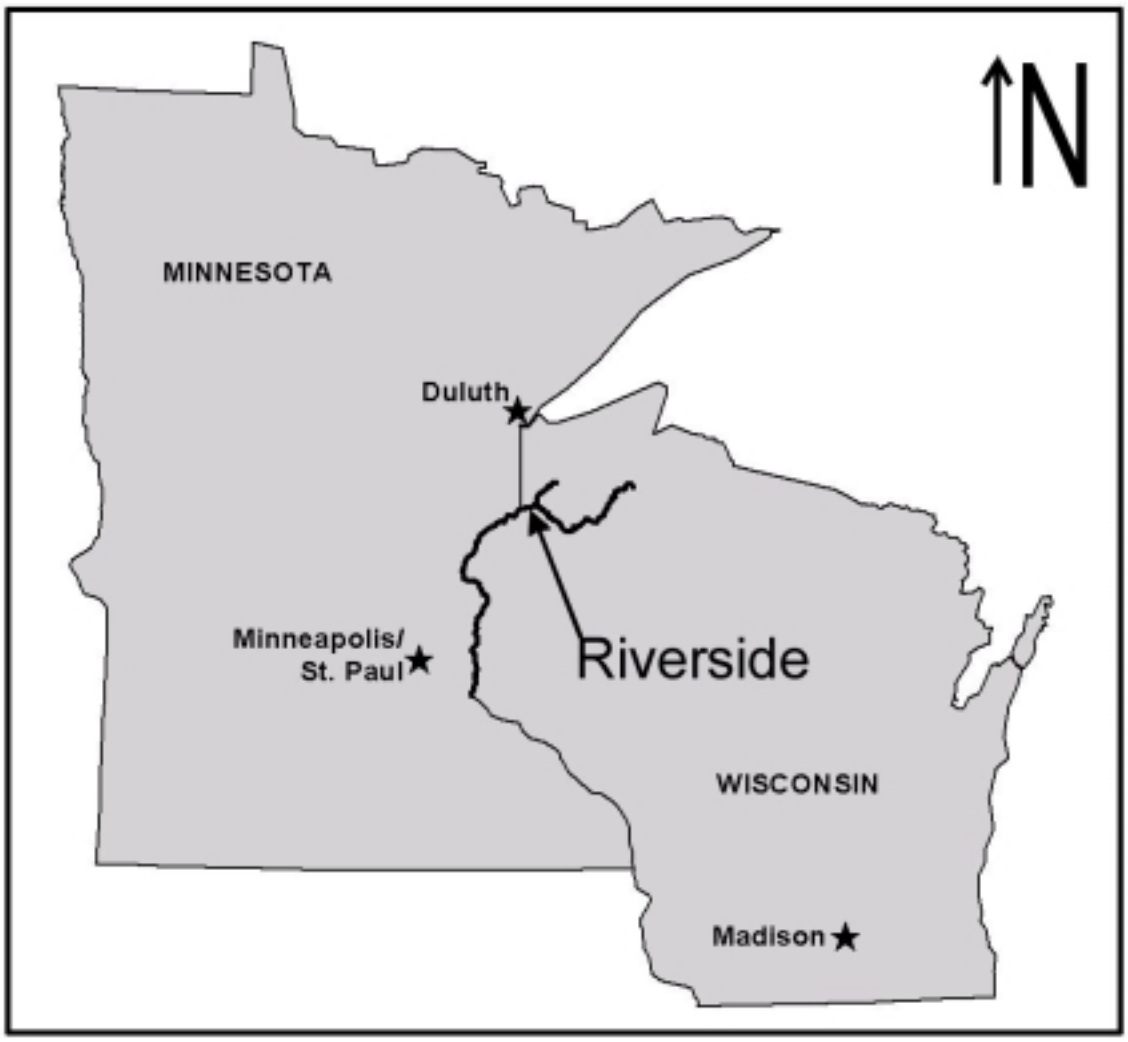

Figure 1. Reference map for locating Riverside.

Currently, parking is available for approximately 60 vehicles. Internal scoping revealed that these parking areas are not heavily used. Heaviest use occurs on the weekend as the site is signed for use as a wayside rest along a state highway. With the transfer of the property to National Park Service ownership, these signs have been removed, significantly reducing the use of this site. It is expected that a significant reduction in the number of available parking spaces will be sufficient to handle expected numbers of visitors.

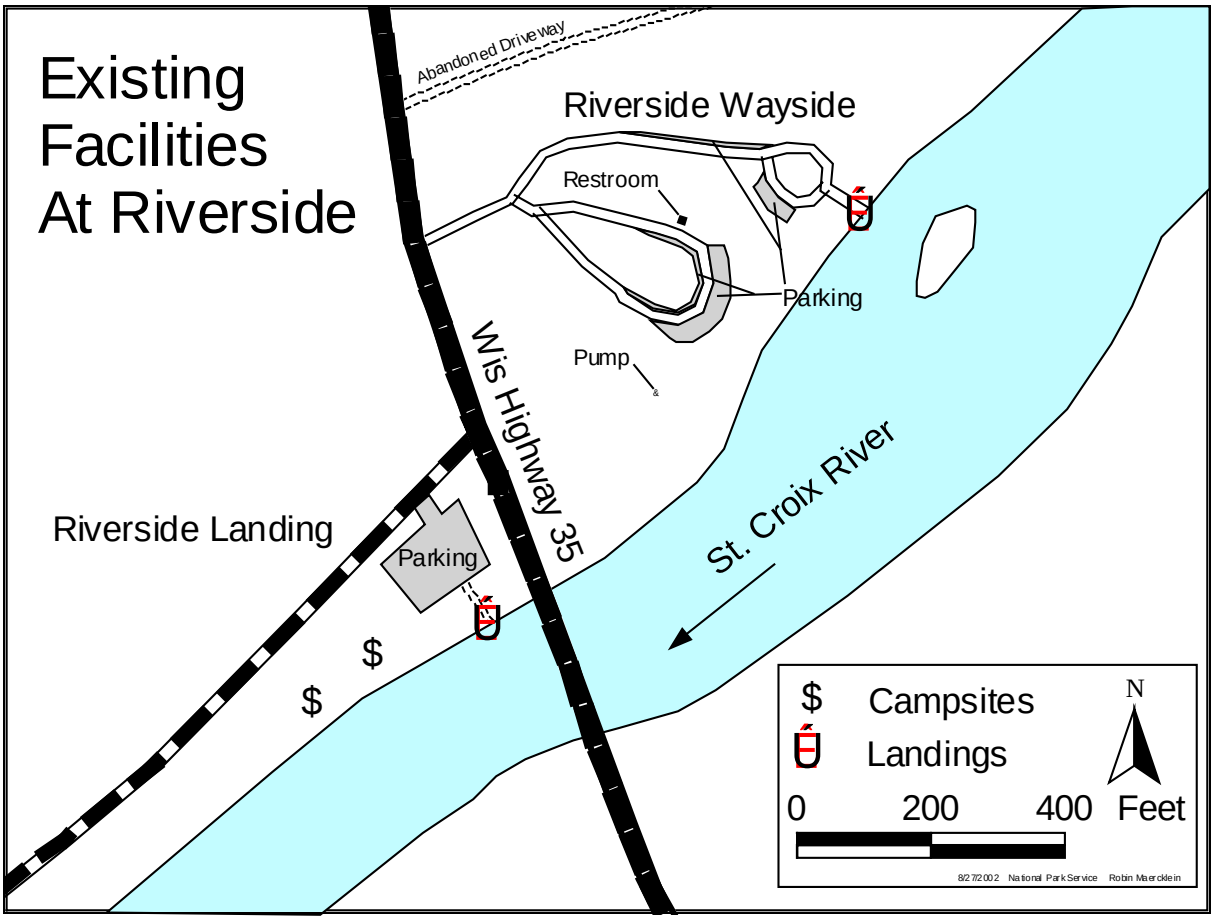

Figure 2. Area map showing general locations of the National Park Service Riverside Landing and Wisconsin Department of Transportation Riverside Wayside. Shapes, sizes and locations of facilities and features are approximate.

Summarizing, the adjacent facilities provide two parking areas for approximately 60 cars, two exposed primitive campsites without safe access to drinking water, two restrooms, two canoe landings including one with erosion problems, drinking water, and a picnic area. The duplication is an adverse impact to recreational resources. Drinking water access located across a state highway from campsites and a landing area is a safety hazard. The eroding landing is contributing sediments and runoff to the river.

The National Park Service contacted WisDOT in 1982 about taking over the wayside but it was not until plans to close the wayside due to increasing maintenance costs brought the idea back to the forefront. The National Park Service again requested a transfer of the property early in 1999 and WisDOT showed interest in donating the property at that time. Donation of the property to NPS completed in 2002.

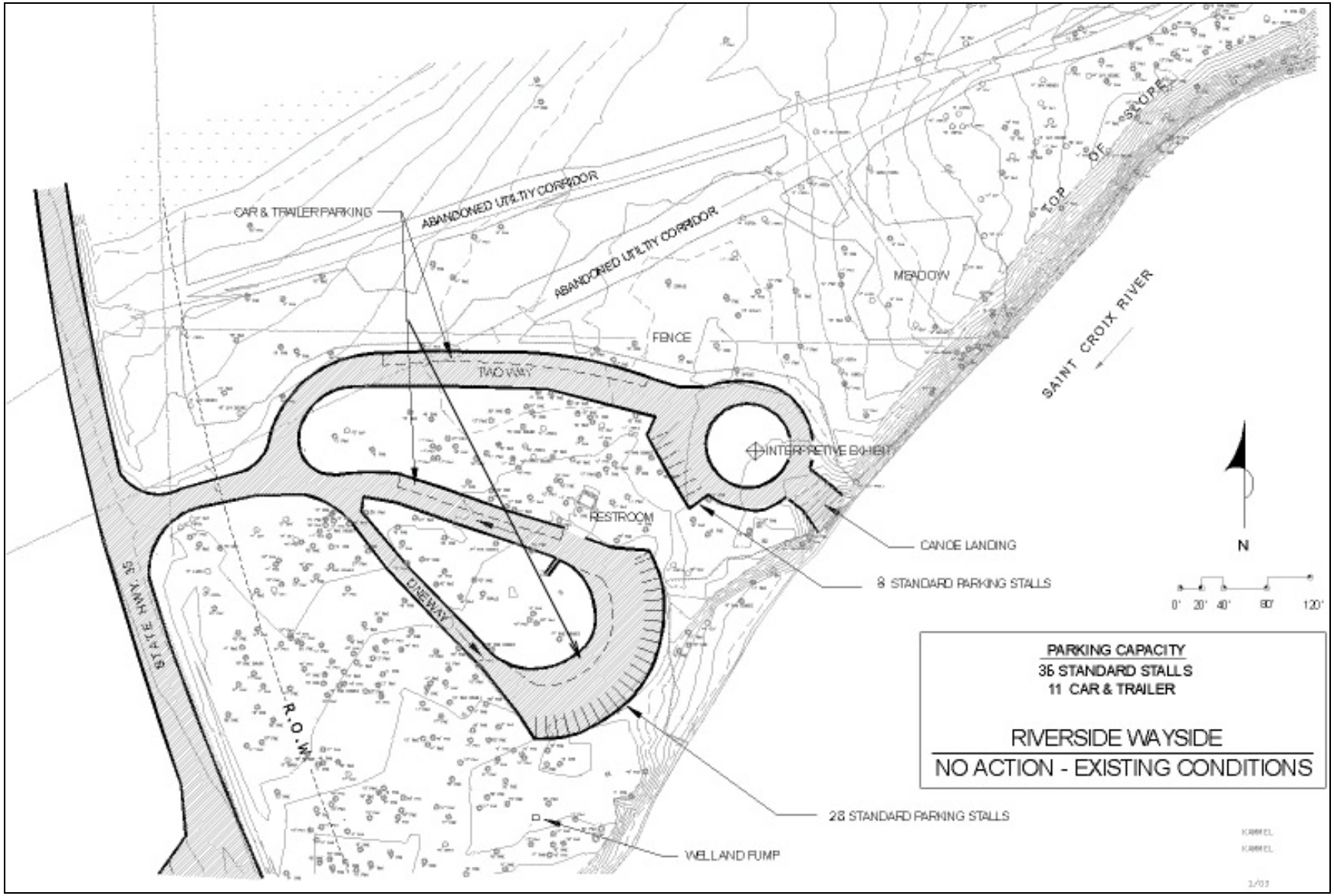

Figure 3. Existing conditions and facilities at Riverside Wayside. Contour intervals and trees are also shown.

The donation of this property gives the National Park Service the opportunity to further the goals of protecting the Riverway by: 1) Enhancing the scenic view from the river through reduction of the number of landings at this site and removing or screening facilities from the river. 2) Reducing the erosion and potential pollution from asphalt and sediment at the canoe landing at the wayside rest. 3) Providing a landing that is available to canoes and boats on trailers. 4) Providing visitors with drinking water that meets NPS standards without the need to cross a state highway. 5) Providing improved camping opportunities that are out of sight of the highway and further removed from highway noise. 6) Provide good access to water for use in fighting fires.

1.3 Summary of Purpose and Need:

In summary, the purpose of this project is to provide facilities (landing, campsites, drinking water, toilets and picnic area) for visitors while reducing duplication of those facilities. The need is to reduce impacts (recreational, scenic and water quality) to a Wild and Scenic River. The need occurs at this time because previously the facilities at the wayside were under State ownership and not under NPS control.

2.0 ALTERNATIVES

2.1 Preferred Alternative

The Proposal: The facilities at Riverside Wayside and Riverside Landing will be combined into one location at the site of Riverside Wayside. This would be accomplished by 1) constructing and maintaining a redesigned parking lot; 2) relocating and replacing the water system to NPS standards; 3) replace the three existing landings with a new landing just downstream of the Wayside ramp; 4) relocating the picnic area; 5) construction and maintenance of two campsites and one group campsite (Figure 4) between the former parking lots; 6) construction of a pad and accessible ramp from the parking area to the river; and 7) closing and revegetation of the former driveway/access north of and adjacent to Riverside Wayside. The current NPS Riverside Landing will be closed when the new facilities are open for public use. This will be accomplished by closing the landing, the associated campsites, and the parking lot and revegetation of the entire site. The gravel parking lot will be scarified with a rake on a backhoe to break up the compacted soil and covered with topsoil prior to revegetation. The boulders marking the edge of the parking area will be moved to boundary between NPS ownership and the township road right-of-way to prevent vehicle access to the area.

Design criteria were given to a National Park Service Landscape Architect to provide conceptual drawings of a redesigned site. The criteria were developed through scoping meetings held within the park with all staff invited. A request for public input resulted in two responses, one of which addressed design criteria and concern about "over-doing" construction at landings. The design criteria submitted to the landscape architect are included in Appendix B. Features of this proposal include:

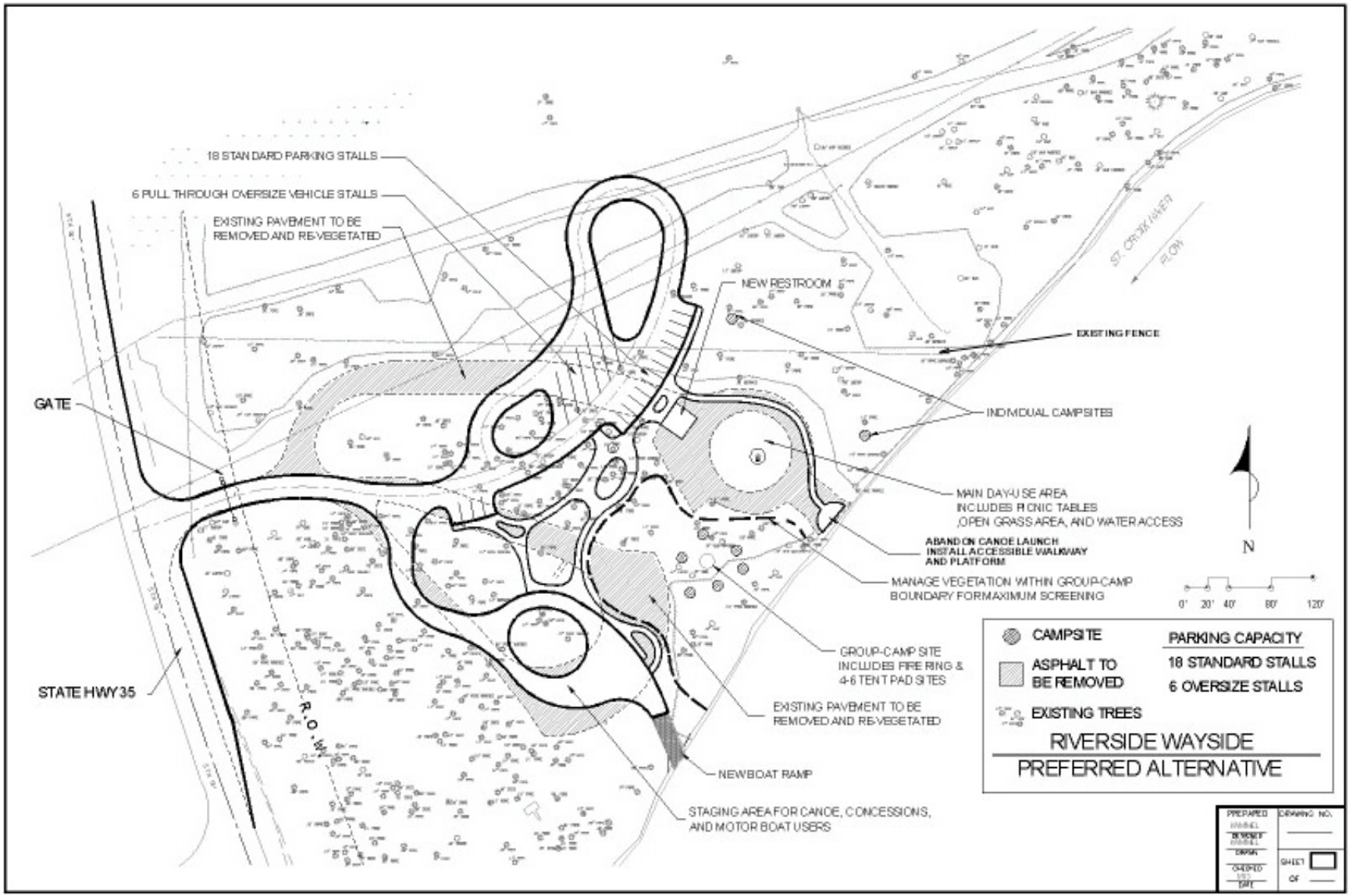

Figure 4. Preferred Alternative at Riverside Wayside.

2.1.1 Boat/Canoe Landings

The canoe landing at Riverside Landing will be closed. A new landing will be constructed at the Riverside Wayside in a location used prior to 1967. This landing will be usable by both boats on trailers and canoes. The landing will be constructed of gravel fill and concrete planking and will be graded to prevent erosion. Concrete planking consists of 8' - 10' long planks of concrete connected together by chains like a ladder, laid on the bottom of the prepared ramp bed. The 4" - 6" gap between the planks will be filled with gravel. An informal landing a short distance downstream from Riverside Landing will be closed. This downstream site is used as a fire truck filling area and the new boat/canoe landing will replace that site. Canoes will still be able to land at the current landing at Riverside Wayside as this will be the access for campsites to be developed in that vicinity.

2.1.2 Parking Areas

The parking area at WisDOT Riverside Wayside will be replaced at a new location farther removed from the river. This lot will have room for 18 cars with 6 pull through spaces for oversized vehicles such as vehicles with trailers and buses. Accessible parking for visitors with disabilities will be provided. There will be no parking provided at the NPS Riverside Landing. Existing pavement at the wayside will be removed and planted with native plants except around the parking area, picnic area and camping areas, where turf grasses would be planted and maintained. Vegetation will include trees, shrubs, grasses and other herbaceous ground cover.

2.1.3 Restroom Facilities

The portable toilets at NPS Riverside Landing will be removed. The existing restroom WisDOT Riverside Wayside will be dismantled and replaced by a new facility at a new location northeast of the current location. The building will be dismantled and the existing vault will be removed and properly disposed of according to regulations. Clean fill will be used to fill in the area and the site will be graded to match the area. The new restroom facility will be located within the previously disturbed footprint and convenient to all users.

2.1.4 Potable Water

The configuration of the existing well and its design prevents it from meeting NPS standards and it will be shut down. The pump will be removed and the well properly capped and abandoned. A new well will be drilled near the new parking area. No problems are expected in drilling and installing a new well. This well will be housed in a small structure that will may also serve as a bulletin board to post park information. The well will use a submersible electrical pump. A power line will be connected by buried line to the nearest utility pole located near the entrance to the wayside. Drinking fountains and a tap will be provided to supply water to visitors.

2.1.5 Day Use/Picnic Area

A day use area with 4-5 picnic tables will be installed and maintained in the area now occupied by the paved turn loop at wayside landing. Turf grasses will be planted and maintained in this area. A pad at the rivers edge will be connected to the parking lot by an accessible walkway.

2.1.6 Edge Delineation

The existing wood posts lining the drives will be removed. Curbs and/or gutters and/or

landscaping will be used to control drainage or mark the edges of roadways and parking areas. Water will be directed away from landings to prevent direct runoff into the river. Overland drainage and filtration through soils will be the goal.

2.1.7 Camping

The existing campsites at the NPS site across the highway will be closed and restored with native vegetation, but not until after replacement campsites are constructed within the Riverside Wayside. Two campsites will be constructed and maintained near the existing paved turn loop, one to the north and one to the east (Figure 4). Each campsite will include a fire ring, a picnic table, and room for 1-3 tents. A group campsite will be installed adjacent to the new parking area and between the existing parking areas (Figure 4). This group campsite will include several picnic tables, at least one fire ring and room for 4-6 tents. Native vegetation will be planted to screen all sites from the parking area. In addition, vegetation will be managed to maximize screening from the river and between the camping and day use areas.

A camping spot for a campground host was considered for this alternative but was eliminated for two reasons; cost and lack of need. However, the area of revegetation due west of the pull through parking areas could be used should the need ever arise.

2.1.8 Environmental Issues

There are no historic structures or cultural landscapes associated with site. However, an archeological survey revealed an area where shovel tests are believed to have found a contiguous archeological site with good integrity outside current disturbed areas. In addition shovel tests revealed some archeological artifacts remaining adjacent to disturbed areas. It is likely that construction of the current Wayside Rest destroyed most of the archeological resources there. Construction of the camping sites and adjacent parking area may impact, though not adversely impact, the archeological site. The campsites will be surveyed by an archeologist prior to construction. One or more of the disturbed areas may still contain archeological resources and require data recovery as mitigation. In addition, an archeologist may be required to be on site when the asphalt is removed to determine site integrity on those areas where there appears to have been less disturbance prior to laying the asphalt. Trails will be established to direct visitors between the camping area and the river and away from archeological resources. At the request of the St. Croix Chippewa Indians of Wisconsin, a fence will also be installed to direct traffic, limiting and containing potential impacts to sensitive areas. Construction will comply with requests from the Wisconsin State Historical Preservation Office to minimize impacts to the archeological sites. To minimize impacts upon mature trees, a map of all trees greater than 12" in diameter in the project area was forwarded to the landscape architect prior to designing this alternative. This map will also be used for the technical construction drawings.

2.1.9 Trash Collection

The National Park Service maintains a "Carry-in Carry-out" policy regarding trash within the Riverway. No trash or recycling receptacles will be provided following this policy.

2.1.10 Wisconsin Department Of Transportation

There will be a 100' Right-of-way from the centerline of the highway into the property. It will require a turn lane for traffic leaving State Highway 35 into the redesigned site (Figure 4).

2.1.11 Ethnographic Resources

There are no known traditional or cultural uses or associations at this site. Consultations with the three Native American Tribes associated with the Riverway elicited no concerns regarding this site.

2.2 Alternative 1

Alternative 1 (Figure 5) has many similarities to the Preferred Alternative. Like the Preferred Alternative, this proposal would rehabilitate and combine the facilities located at Riverside Wayside and Riverside Landing into one side of the highway at Riverside Wayside. At the NPS Riverside Landing this will be accomplished by closing the landing and associated campsites and revegetation of the entire site. A smaller parking lot serving approximately 5 cars with trailers would remain at Riverside Landing for snowmobile trailhead use and as a bus transfer location. Other features of this alternative include the following:

2.2.1 Boat/Canoe Landings

The boat launch would remain in the existing location but would be rehabilitated and stabilized in order to make it accessible for trailers. Expanded parking for vehicles with trailers would be near the boat launch. No accessible ramp to the river is planned for this alternative.

2.2.2 Parking Areas

The main parking areas would be redesigned but in similar locations to the current design to maximize the use of existing paved areas. The main parking area would be pulled back from the river farther than the existing lot to better protect the view from the river and to slow runoff to the river. This parking lot will accommodate day use and oversized vehicles and vehicles with trailers. A total of 32 standard and 10 oversize stalls will be available for use.

2.2.3 Restroom Facilities

The restroom facilities and well would remain in the current locations. The restroom facilities could be refurbished or completely rebuilt on site. The existing vault would be tested for tightness and repaired or replaced if it leaks.

2.2.4 Potable Water

The existing well at WisDOT Riverside Wayside does not meet NPS standards and will be either rehabilitated or shut down. If abandoned, the existing pump will be removed and the well properly capped and abandoned. A new well will be drilled nearby and will use a submersible electrical pump. A power line will be connected by buried line to the nearest utility pole located near the entrance to the wayside. Drinking fountains and a tap will be provided to supply water to visitors.

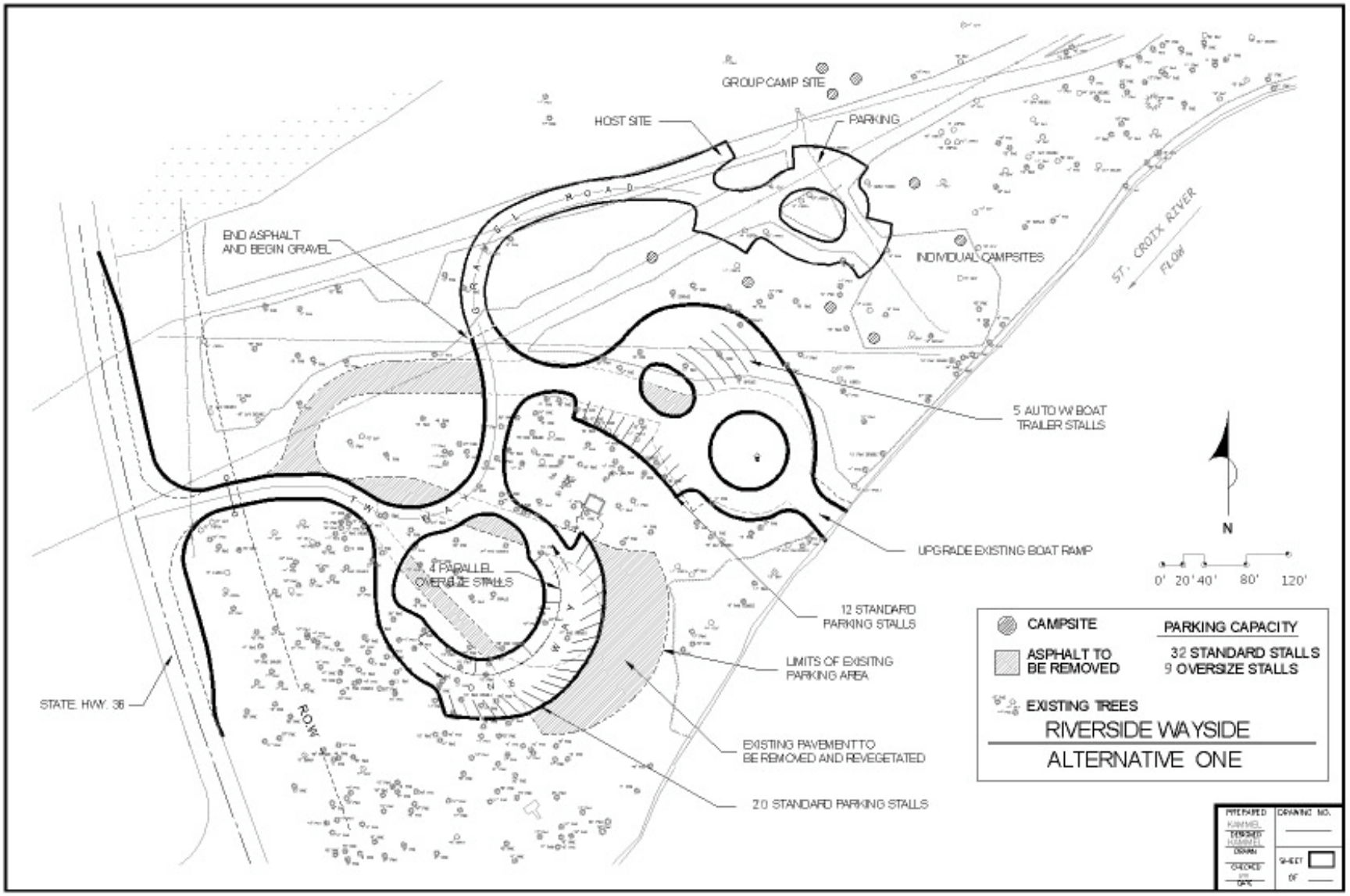
GROUP CAMP SITE
HOST SITE
PARKING
END ASPHALT
AND BEGIN GRAVEL
INDIVIDUAL CAMPSITES
ST. CROIX RIVER
FLOW
5 AUTO W/ BOAT
TRAILER STALLS
UPGRADE EXISTING BOAT RAMP
4 PARALLEL
OVERSIZE STALLS
12 STANDARD
PARKING STALLS
LIMITS OF EXISTING
PARKING AREA
STATE HWY. 36
R.O.W.
EXISTING PAVEMENT TO
BE REMOVED AND REVEGETATED
20 STANDARD PARKING STALLS
N
0' 20' 40' 80' 120'
CAMPSITE
ASPHALT TO
BE REMOVED
EXISTING TREES
PARKING CAPACITY
32 STANDARD STALLS
9 OVERSIZE STALLS
RIVERSIDE WAYSIDE
ALTERNATIVE ONE
PREPARED
DRAWN
CHECKED
DRAWING NO.
SHEET
OF

Figure 5. Alternative 1 for Riverside Wayside.

2.2.5 Day Use/Picnic Area

The day use/picnic area would be concentrated in the area between the existing parking lots. It would be expanded into the current main parking area where pavement will be removed and turf grasses will be planted and maintained.

2.2.6 Edge Delineation

The existing wood posts lining the drives will be removed. Curbs and/or gutters and/or swales will be used to control drainage or mark the edges of roadways and parking areas. Water will be directed away from landings to prevent direct runoff into the river. Overland drainage and filtration through soils will be the goal.

2.2.7 Camping

A camping area would be developed northeast of the trailer parking area. Five individual campsites and a group campsite would surround a parking area and thus be accessible by car. Camping in vehicles, camper shells, or trailers would be prohibited. This parking area will be separate from other parking areas.

A pull in camping spot is reserved for a campground host, labeled as "HOST SITE" on figure 5. A volunteer campground host may be recruited for this site if the need arises. This site will accommodate a small camping trailer and may have electrical hook-ups for the resident there.

2.2.8 Environmental Issues

The only cultural resources known at this site are archeological resources. An archaeological survey revealed potential sites that needed to be protected. Trails will be established to direct visitors between the camping area and the river. An extensive archeological survey will be required because this alternative is more likely to impact archeological and historical resources. As in the preferred alternative, an archeologist will survey campsites prior to construction and also be on hand to survey under the asphalt as it is removed. A fence will also be installed to direct traffic, further limiting potential impact to these areas. As in the Preferred Alternative, a map of all trees greater than 12" in diameter in the project area was forwarding this request to the landscape architect prior to designing this alternative. This map will be used to minimize impacts to these trees when the technical construction drawings are made. The entrance road is shifted approximately 80 feet north to accommodate turning radiuses combined with the desire to move parking back away from the river.

2.2.9 Trash Collection

No trash or recycling receptacles will be provided following the National Park Service's carry-in carry-out policy.

2.2.10 Wisconsin Department Of Transportation

There will be a 100' Right-of-way from the centerline of the highway into the property. It will require a turn lane for traffic leaving State Highway 35 into the redesigned site (Figure 4).Mowed areas will be significantly reduced and native plantings will replace many of these areas including those areas where pavement has been removed. Th

2.3 Alternative 2

This alternative is identical to the Preferred Alternative with the exception that the parking area at Riverside Landing will remain but be reduced to accommodate five cars. This parking area may have use for snowmobile trailhead use and as a bus transfer point. The rest of the parking area will be planted with native vegetation for screening and restoration. Only the differences between the two alternatives are included below.

2.3.1 Parking Areas

Parking at the NPS Riverside Landing would be reduced from the approximately 20 vehicle capacity to accommodate 5 vehicles. The remaining portion of the parking lot will be restored by breaking up the compacted gravel and soil with a rake on a backhoe and covered with topsoil prior to planting with native plants. Vegetation will include trees, shrubs, grasses and other herbaceous ground cover. The large rocks/small boulders marking the edge of the parking area would be moved to the boundary of the new parking area and along the boundary of the township road (Markville Road) right-of-way to prevent entry by vehicles beyond the parking area.

2.4 Comparative Summaries of Alternatives

Table 1. Comparative summary of Alternatives

	Preferred Alternative	Alternative 1	Alternative 2	No Action Alternative
General	Close all facilities at Riverside Landing. Riverside Wayside would be redesigned and rebuilt.	Close all facilities at Riverside Landing. Riverside Wayside would be redesigned and rebuilt and will include campsites accessible by vehicle.	Close all facilities at Riverside Landing except reduce parking to accommodate 5 cars. Riverside Wayside would be redesigned and rebuilt.	All facilities at Riverside Landing and Riverside Wayside remain open, except drinking water, duplicating them on both sides of State Highway 35.
Boat/Canoe Landing	New boat & canoe access 250' southwest of current Wayside canoe access. Close informal boat ramp 0.25 mile downstream.	Wayside canoe access rehabilitated to allow boats on trailers and address erosion problems. Close informal boat ramp 0.25 mile downstream.	New boat & canoe access 250' southwest of current Wayside canoe access. Close informal boat ramp 0.25 mile downstream.	Two canoe access points remain open. Will require future work to stabilize erosion at Wayside canoe access.
Parking Areas	Redesigned parking areas out of view from the river will accommodate 18 standard and 6 oversize vehicles.	Redesigned parking areas out of view from the river will accommodate 32 standard and 10 oversize vehicles, plus for 12 for the campsites, plus 5 standard stalls at Riverside Landing.	Redesigned parking areas out of view from the river will accommodate 18 standard and 6 oversize vehicles, plus 5 standard stalls at Riverside Landing.	Existing parking lots remain with capacity for 46 standard and 16+ oversize vehicles, most in full view from the river.
Restroom Facilities	New vault toilet at a new location replaces the existing structure at the Wayside.	New vault toilet at a new location replaces the existing structure at the Wayside.	New vault toilet at a new location replaces the existing structure at the Wayside.	Portable toilets and sub-standard vault toilets remain.
Potable Water	New well replaces old at a	New well replaces old at a	New well replaces old at a	Old well will be properly

	Preferred Alternative	Alternative 1	Alternative 2	No Action Alternative
	new location.	new location.	new location.	capped. No water will be supplied.
Day Use/Picnic Areas	Redesigned picnic area located between existing parking lots. Accessible ramp from parking area to pad at river edge.	Redesigned picnic area located between existing parking lots.	Redesigned picnic area located between existing parking lots. Accessible ramp from parking area to pad at river edge.	Existing picnic area remains open at the Wayside location
Edge Delineation, Runoff Control	Curbs and/or gutters and/or landscaping will be incorporated into design to minimize or slow runoff. Posts will be removed.	Curbs and/or gutters and/or landscaping will be incorporated into design to minimize or slow runoff. Posts will be removed.	Curbs and/or gutters and/or landscaping will be incorporated into design to minimize or slow runoff. Posts will be removed.	Water from parking areas will continue to run directly into river. Posts will continue to rot and need replacement.
Camping	2 campsites plus a group campsite will be constructed near the existing canoe launch.	5 campsites accessible by vehicle or canoe plus a group campsite clustered around a separate parking area.	2 campsites plus a group campsite will be constructed near the existing canoe launch.	2 campsites remain open at the Riverside Landing.
Environmental Issues	May impact, but not adversely, archeological resources. Soil erosion and spread of exotic plants will be reduced.	May impact archeological resources. Mitigation may be required. Soil erosion and spread of exotic plants will be reduced.	May impact, but not adversely, archeological resources. Soil erosion and spread of exotic plants will be reduced.	Limited potential impact to cultural resources. Soil erosion and spread of exotic plants likely to continue.
Trash Collection	Collection of trash and recyclables will be discontinued.	Collection of trash and recyclables will be discontinued.	Collection of trash and recyclables will be discontinued.	Collection of trash and recyclables will be discontinued.
Wisconsin DOT	WisDot will retain a 100' right-of-way on the east side of the highway.	WisDot will retain a 100' right-of-way on the east side of the highway.	WisDot will retain a 100' right-of-way on the east side of the highway.	WisDot will retain a 100' right-of-way on the east side of the highway.

	Preferred Alternative	Alternative 1	Alternative 2	No Action Alternative
Ethnographic Resources	None known from this site.	None known from this site.	None known from this site.	None known from this site.

2.5 No Action Alternative

Under this alternative, the rehabilitation of Riverside Wayside would not take place and both landings would remain open. Few changes to current facilities would take place. No changes would be expected to the plant or wildlife community. The nearest landing for boats with trailers would be the informal site 0.25 mile downstream, which may make the site subject to erosion. It is expected that the canoe landing at the wayside will continue to erode and will require further action to reduce or eliminate the erosion and tripping hazard potential. The water supply will have to be closed and/or replaced to maintain it at NPS standards. Existing camping facilities at the landing would remain in view of the highway. Noise from the highway will continue to be easily heard at the campsites. Visitors using the campsites would continue to need to cross State Highway 35 to access drinking water, if provided. Both parking lots would remain visible from the river. Collection of trash and recyclable materials would be discontinued at the wayside location in keeping with the National Park Service's 'carry-in, carry-out' policy.

2.6 Environmentally Preferable Alternative

An environmentally preferred alternative will balance the needs of the visitor, protect the significant values for which the Riverway was established, protect archeological and historical resources and will result in preservation of the environment. The Environmental Protection Agency defines the environmentally preferred alternative as "…the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources." (USDI 2000, Chap. 3, 2.7D, page 23). For this Environmental Assessment, four main criteria are considered: *Needs of the visitor*; *Protection of significant resources*; *Protection of archeological and historic resources*; and *Preservation of the environment*. These criteria are derived from the significant values as described by the General Management Plan (USDI 1998). These significant values are derived from the Organic Act established the National Park Service and the Wild and Scenic Rivers Act that established the St. Croix National Scenic Riverway. The *needs of the visitor* is included under this definition because of their emphasis as significant to the Riverway under the General Management Plan.

Each of the impact topics listed in Table 2 could also be listed within one or more of the four main criteria chosen for determining the environmentally preferable alternative. In several cases the impact topic was a non-issue as little or no impact occurred in any of the alternatives. Others, while needing to be discussed under impacts, do not significantly add to the decision-making process for determining the environmentally preferable alternative. Though each topic is not specifically discussed, they were considered and generally lumped into each of the four main criteria as listed in the text below.

2.6.1 Needs Of The Visitor

Visitors' needs must address both day use and overnight use. These needs include: reasonable access to the river by individuals, groups and outfitters; sufficient parking space at landings for day use, environmental education and overnight use; a sufficient number of reasonably spaced campsites that are accessible by boat and/or foot; aesthetically pleasing surroundings with human development kept to a minimum; a safe and clean environment for these and other recreational

activities. The impact topic from Table 2 considered here is recreation/visitor use.

The basic needs of the visitor as identified above are provided by each of the three alternatives with a few differences. Drinking water is not provided by the No Action Alternative. In Alternative 1, Alternative 2 and the Preferred Alternative the visitor experience is improved through construction of campsites that are more aesthetically pleasing and a reduction of views of human disturbances along the river. The Preferred Alternative and Alternative 2 provide an accessible ramp from the parking area to provide access to the river. These three alternatives also include a boat ramp that provides access for small fishing boats on trailers. All alternatives provide a sufficient number of campsites. Sufficient parking is supplied by all alternatives, however, the Preferred Alternative does not specifically provide parking for snowmobiles. Communication with local a snowmobile group has suggested that parking at this site is unnecessary. When viewed only from the perspective of the needs of the visitor, either the Preferred Alternative, Alternative 1, or Alternative 2 would be the Environmentally Preferred Alternative.

2.6.2 Protection Of Significant Resources

The significant values that may be affected by each alternative include cultural, scenic and recreational opportunities. The recreational opportunities include high-quality canoe camping with multiple day camping opportunities, access for fishing, and extended opportunities to experience the solitude and beauty of the Riverway. An environmentally preferred alternative should enhance these values by reducing evidence of modern human presence while providing boat access and camping opportunities and protecting archeological resources. The impact topic from Table 2 considered here is scenic resources. Cultural resources are considered separately in section 2.6.3.

This section discusses primarily scenic resources. The impacts to recreational opportunities are addressed above in 2.6.1 and these are limited to camping and availability of drinking water. Archeological resources are discussed in the following section. Alternative 1, Alternative 2 and the Preferred Alternative will improve scenic resources through improved screening of facilities and an increase in native vegetation communities. The No Action Alternative will leave existing impacts to the scenery in place. When viewed only from the perspective of the scenic resources Alternative 1, Alternative 2 or the Preferred Alternative could be considered the Environmentally Preferred Alternative.

2.6.3 Protection Of Archeological And Historical Resources

Archeological resources are most likely to be protected by the No Action Alternative as there will be no immediate ground disturbance but could have minor long-term disturbance from visitor use. Alternative 1 will likely have an adverse impact upon archeological resources. Additional surveys and extensive excavation will need to occur to mitigate impacts. The Preferred Alternative and Alternative 2 were developed to prevent impacts, but it is recognized minor impacts may occur at development or through long term visitor use. Therefore minor impacts of these resources may occur but no adverse impact. Viewed only from this perspective, the No Action Alternative or possibly the Preferred Alternative or Alternative 2 would be the Environmentally Preferred Alternative. The impact topics from Table 2 considered here are prehistoric resources, ethnography and historic resources.

2.6.4 Preservation Of The Environment

Preservation of the environment includes limiting or eliminating erosion potential, minimizing the number of native trees and other vegetation that will be impacted or removed, and restoration and preservation of native habitat to the maximum extent possible. The impact topics from Table 2 considered here are: air quality; soils; water quality; floodplains; wetlands; vegetation; wildlife, and; threatened, endangered and rare species.

The No Action Alternative will leave existing erosional features in place and will require work in stabilizing the canoe landing at the wayside at a future date. However, the No Action Alternative will leave all trees whereas the two other alternatives will require a moderate number of mature trees (25-60) to be removed. The Preferred Alternative, Alternative 1 and Alternative 2 will eliminate mowing in a large portion of the wayside and will include restoration with native vegetation where asphalt is removed. The Preferred Alternative will result in the largest area of revegetation. Native plant communities will be encouraged or planted. In the long term, the number and diversity of trees, understory trees and shrubs and ground vegetation is expected to increase in all except the No Action Alternative. The Preferred Alternative and Alternative 2 will best control erosion but removes a moderate number of trees. Despite the short-term impact through the number of trees removed in all but the No Action Alternative, the long-term outcome will be a more diverse population of trees while keeping the same number or more trees than now exist. The Preferred Alternative combines the best erosion control with the largest area of revegetation with a smaller moderate number of trees cut. Therefore from the perspective of only preserving the environment the Preferred Alternative would be the Environmentally Preferred Alternative.

2.6.5 Environmentally Preferred Alternative

The Preferred Alternative is considered the best fit as the environmentally preferred alternative. This alternative is chosen from the four alternatives given: Preferred Alternative, Alternative 1, Alternative 2 and No Action Alternative. A summary table (Table 2) was used to assist in this selection. Given the four criteria used to select the environmentally preferred alternative, no one alternative stood out as the most obvious choice. Alternative 1 is eliminated because it is likely to have an adverse impact to archeological resources and the highest number of mature trees removed. The No Action Alternative only has a potential for minor long term impact to archeological resources but maintains impacts to scenic resources through duplication of facilities visible from the river and mowed areas, impacts to recreational resources because of non-aesthetic camping facilities and lack of drinking water, and impacts to water quality from an eroding landing. Although both the Preferred Alternative and Alternative 2 may have a minor impact to archeological resources, they are not considered adverse and less severe than those impacts to other resources caused by the No Action Alternative. Of those two, the Preferred Alternative provides the largest area of native plant restoration. Therefore the Preferred Alternative is the best fit as the Environmentally Preferred Alternative.

Table 2. Summary table used to determine which alternative best fits the description of the Environmentally Preferred Alternative. The text is highlighted in bold, italicized, and the background shaded in each box where it best fits the description of the Environmentally Preferred Alternative. More than one alternative may fit the description for environmentally preferred for a given criteria.

	Needs of the Visitor	**Protection of Significant Scenic Resources**	**Protection of Archeological Resources**	**Preservation of the Environment**
Preferred Alternative	***Provides sufficient parking area, drinking water, addition of a boat ramp, aesthetically pleasing campsites and an accessible ramp to the river***	***Provides best protection of scenic and recreational resources through reduced number of visible facilities***	Minor impact, but no adverse impacts to archeological resources. Will require an archeologist present during certain stages of construction.	***Removal of approximately 27 mature trees, largest area of rehabilitation on both sides of the road with native vegetation, reduced erosion potential***
Alternative 1	***Provides sufficient parking area, drinking water, addition of a boat ramp, and an increase in number of campsites that are also more aesthetically pleasing***	***Provides best protection of scenic and recreational resources through reduced number of visible facilities***	Would likely have an adverse impact to archeological resources. Will require mitigation, additional surveys, and possibly extensive excavation.	Removal of approximately 59 mature trees, rehabilitation of large areas on both sides of the road with native vegetation, reduced erosion potential
Alternative 2	***Provides sufficient parking area, drinking water, addition of a boat ramp, aesthetically pleasing campsites and an accessible ramp to the river***	***Provides best protection of scenic and recreational resources through reduced number of visible facilities***	Minor impact, but no adverse impacts to archeological resources. Will require an archeologist present during certain stages of construction.	Removal of approximately 27 mature trees, rehabilitation of large areas on both sides of the road with native vegetation, reduced erosion potential
No Action Alternative	Provides sufficient parking area, no drinking water, no boat ramp, and no change in number of campsites	Scenic resources remain impacted by duplicate facilities, lack of screening. Best protection of cultural resources	***Potential long term minor impacts to archeological resources***	No mature trees cut, conversion of turf grasses to native vegetation does not occur, erosion continues at Wayside's canoe landing

3.0 AFFECTED ENVIRONMENT

St. Croix National Scenic Riverway is located on the Minnesota-Wisconsin border and in northwestern Wisconsin. The proposed project is on the north side of the St. Croix River adjacent to Wisconsin State Highway 35 in northern Burnett County in Blaine Township, T42N R15W Section 33 (Figure 1). Areas directly affected by the proposed development include the NPS landing, the Riverside Wayside Rest, the adjacent National Park Service lands north of the wayside and an informal boat landing one quarter mile downstream of Riverside Landing. The adjacent National Park Service lands, purchased in fee in 1970, is included because development in both the Preferred Alternative and Alternative 1 will occur partly on this property. Recreational opportunities will also be affected as access to the river, number and location of camping opportunities, and scenic views will be affected.

The St. Croix National Scenic Riverway is one of the most biologically diverse units of the National Park Service in the Midwest. The linear extent of the Riverway across varied terrestrial and aquatic habitats results in a variety of invertebrates, amphibians, reptiles, birds, and mammals that inhabit and use the Riverway. Moreover, the park is an important location for rare species of plants and animals. Five species of animals, peregrine falcon (*Falco peregrinus*), bald eagle (*Haliaeetus leucocephalus*), gray wolf (*Canis lupus*), winged mapleleaf mussel (*Quadrula fragosa*) and Higgins' Eye pearly mussel (*Lampsilis higginsi*) are present within the Riverway and federally listed as endangered or threatened. Ten other species known to exist within the Riverway are currently proposed for federal listing, and 78 other species of amphibians, birds, fish, insects, mammals, molluscs, plants, and reptiles are presently listed as endangered, threatened, or of special concern by the states of Minnesota and/or Wisconsin. A bald eagle nest, active in 2001, is located approximately 0.4 miles northeast of the proposed development project but was abandoned in 2002. The nearest nest active in 2002 is located 1.8 miles up river and is probably used by the same pair as the former site. As many as eight wolf packs have been located along the Riverway with one territory that includes the Riverside area (WDNR 2001). Wolf tracks from several wolves were found within the adjacent National Park Service land northeast of the wayside in January 2002. A park neighbor reported an active wolf den within 2 miles of Riverside in 2000 but this has not been confirmed. However, it would be within a known wolf pack territory. Except for the bald eagle and the gray wolf, none of the above species are known to breed or reside within the affected area, nor are they expected to be affected by this project.

Numerous prehistoric archeological sites are found along the St. Croix National Scenic Riverway. These sites illustrate human occupation of the area from the Archaic and Woodland through the Historic period. Two sites in the Riverway are listed on the National Register of Historic Places. The wayside has been found to contain numerous indications of previous occupation by Native Americans. A survey suggests that the artifacts found represent a significant Middle to Late Woodland and early Historic site. The investigating archeologist recommends that this site be considered eligible for listing to the National Register of Historic Places.

The National Park Service strives to maintain those values for which the Riverway was established. To aid in reaching this goal, the General Management Plan (USDI 1998) divides the

Riverway into management zones that describe the experience visitors should encounter within those zones. Most of the St. Croix River in the affected area is designated as 'near-primitive northwoods' as described below:

> "An area managed as near-primitive northwoods will provide a natural landscape that is typified by or reflects the northwoods ecosystem. There may be signs of people, but generally it will look like a natural, remote, primitive area. Visitors will likely encounter wildlife, and there will be many opportunities for high-quality fishing. Most visitors will be on foot, paddling, or engaged in other human powered outdoor recreational activities, although some low-speed motorboat travel will also be permitted.
>
> Because access will be limited in this area there will be fewer visitors and many opportunities to find solitude and quiet. Encounters with National Park Service staff will also be infrequent. These areas will offer opportunities for challenge and adventure. Development, including NPS facilities, will be rare - one could go for long stretches and see no development. Small, primitive campsites (i.e., cleared areas with fire rings and pit toilets, which are not accessible by road), designated trails, and access points may be present. Onsite controls and restrictions may be used for resource protection and visitor safety, including some resource modifications that blend in with the natural environment."

The 'near-primitive northwoods' zone is the least developed, most natural zone within the Riverway. Due to existing development, the General Management Plan designates the immediate 0.5 mile stretch of river around Riverside as a 'developed recreation area'. This zone is described below:

> "This area will be characterized by planned development that blends with the northwoods ecosystem. Architectural style, detailing, and color schemes will blend into and not detract from the natural beauty of the area. Development will be clustered and sensitively placed to minimally disturb the natural landscape… Natural, social, and built elements all will contribute to the visitor experience. Opportunities still will be available for fishing and observing wildlife… This area will provide many opportunities for group experiences. There will often be large numbers of visitors, and the probability of encountering other visitors and land managers will be high… Both motorboats and human-powered outdoor recreational activities will be permitted as long as they can coexist with other uses. The area could accommodate a moderate to high level of recreation and/or administrative development. NPS facilities, which will be in clusters and sensitively designed and placed, may include visitor and environmental education centers, interpretive structures, primitive and developed campsites, campgrounds, small and large access points, and administrative structures… Resources will be modified for visitor and NPS operational needs and to mitigate and minimize resource impacts due to visitor use."

The extent and magnitude of development proposed within the range of alternatives fit within those

guidelines described above. National Park Service staff and park neighbors anecdotally report as many as 30 vehicles using these parking lots at one time though generally use is considerably less. A significant amount of cars may be attributed to use of the site as a State Highway Wayside Rest. Traffic counters are not used so actual use is unknown. The wayside is closed during winter and NPS staff report occasional use by vehicles with snowmobile trailers at the Riverside Landing parking lot.

The number and location of campsites in the preferred alternative is different than the current configuration. This affects the availability of recreational opportunities. Camping is limited to one night per site. Campsites are located throughout the Riverway allowing overnight use accessed by water and/or foot. Campsites are spread out to allow visitors to maintain distance from each other but also to allow for varied trip locations and travel distances by boat or canoe. Two campsites are currently located at Riverside Landing. Nineteen campsites are located within 10 miles on the St. Croix and Namekagon rivers (Figure 6). Of these, only one campsite is located downstream, 2.2 miles from Riverside. Five campsites, including a group campsite, are located upstream on the St. Croix River with the nearest 0.8 miles away at Big Island. The remaining thirteen campsites within 10 river miles of Riverside are located upstream on the Namekagon River. Four of these are group campsites. The ten mile distance was subjectively chosen as a reasonable distance for daily travel.

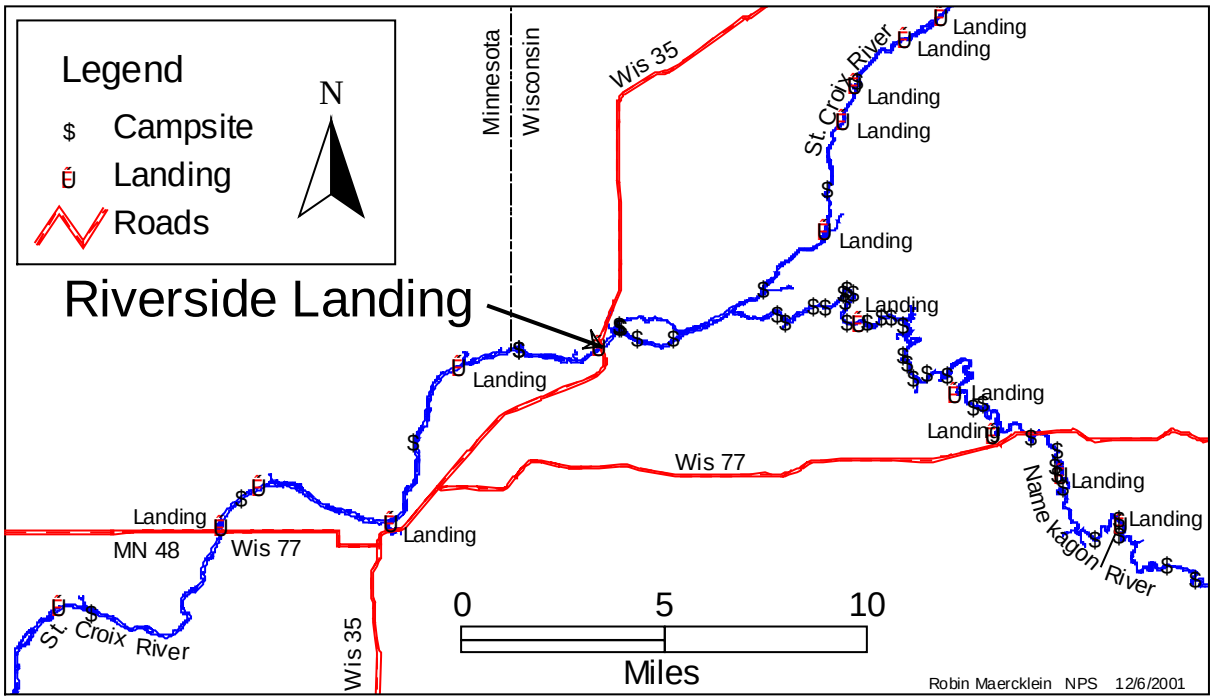

Figure 6. Location of campsites and landings within 13 - 15 river miles of Riverside Landing.

Most of the proposed development site lies within the landscaped area of the wayside. It contains a mature forest with understory removed and mowed turf grasses. The overstory is dominated by red pine (*Pinus resinosa*) but also includes significant amounts of white pine (*Pinus strobus*), quaking aspen (*Populus tremuloides*), red oak (*Quercus rubra*), paper birch (*Betula papyrifera*), and white spruce (*Picea glauca*). Most of these trees fall within 6-30 inches in diameter at breast height.

Understory shrub species outside of and at the edge of the present developed area consist of American hazelnut (*Corylus americana*), red-osier dogwood (*Cornus stolonifera*), northern elderberry (*Sambucus canadensis*) and saplings of the above trees and green ash (*Fraxinus pennsylvanica*). Ground cover is primarily mowed grasses with native and non-native species at the perimeter of the mowed areas. Spotted knapweed (*Centaurea maculosa*), an invasive exotic plant species, is found near the landing at the wayside rest and within adjacent National Park Service lands north of the wayside. This plant is typical of disturbed and/or grazed areas and could easily colonize newly disturbed areas.

Glaciers deposited the parent materials of the soils presently within the St. Croix watershed. These include calcareous material from southern Canada, and bedrock materials from the Laurentian shield area of Minnesota and Ontario. Unconsolidated glacial sands, clays, silt loams, sedimentary rocks and gravel are typical. According to Burnett County General Soil Map (Burnett County Land and Water Conservation District, 1968) soils at the site are classified as "Miscellaneous Land Types Association". This association was designed to include the "…conglomeration of miscellaneous land types, soil complexes and soil types which occur mainly along the St. Croix River in such a pattern and size that it is impossible to separate them on a map of this scale." These soil types include sandy loam, loamy sand, and gravelly sandy loam: soils typical of glacial deposits in this area. The Soil Conservation Service (USDA 1971) gives a similar description as "…alluvial lands, sandy".

Warm summers and cold winters characterize the climate in the St. Croix River basin. Major recreational use of the rivers is primarily confined to spring, summer, and fall. From freeze-up in November to the April ice breakup, use along the river diminishes although cross-country skiing is a favorite activity. Snowmobile use on the river is prohibited upstream from Riverside but is allowed below the bridge on the frozen surface of the river. Tracks from snowmobiles are frequently observed and indicate some use in this area. Annual precipitation averages from 26 inches (66 cm) to 30 inches (76 cm) per year.

Water quality of the St. Croix River is considered outstanding. Ground water in Burnett County is generally good.

4.0 IMPACTS

4.1 Impacts of Preferred Alternative

4.1.1 Impact Definition

Impacts are defined by intensity as:

- Negligible - Impacts occur, but are so minute that they have no observable effects on plants and animals and the ecosystems supporting them.
- Minor: Impacts are detectable, but the severity and timing of changes are not expected to be outside the natural variability (natural variability) and not expected to have any long-term effects on biological resources or ecosystems. Population numbers, population structure, genetic variability, and other demographic factors for species may

have small, short-term changes, but long-term characteristics remain stable. Key ecosystem processes may have short-term disruptions that are within natural variability, and habitat for all species remains functional.

- Moderate: Impacts are detectable and the severity and timing of changes are expected to be outside the natural variability for short periods of time and changes within the natural variability may be long-term in nature. Population numbers, population structure, genetic variability, and other demographic factors for species may have small to moderate, short-term declines, but rebound to pre-impact numbers. Species are not at risk of being extirpated from the park, key ecosystem processes may have short-term disruptions that are outside natural variability (but return to natural variability), and habitat for all species remains functional.
- Major: Impacts are detectable and the severity and timing of changes to parameter measurements are expected to be outside the natural variability (natural variability) for short to long periods of time - or even be permanent. Changes within the natural variability may be long-term or permanent in nature. Timing of the impacts is important with respect to species or ecosystem functioning. Population numbers, population structure, genetic variability, and other demographic factors for species may have large, short-term declines with long-term population numbers significantly depressed. In extreme cases, species may be extirpated from the park, key ecosystem processes may be disrupted, or habitat for any species is rendered non-functional.

Impacts are defined by duration as:

- Short-term: Impacts are temporary, lasting at most throughout construction.
- Moderate-term: Impacts are temporary, lasting less than a year.
- Long-term: Impacts are temporary or permanent, remaining over a year.

4.1.2 Cumulative Impacts

Cumulative effects due to the preferred alternative are considered to be none except a possible long-term beneficial minor impact. The Riverside area lies within the 'Developed Recreation' area and the proposal calls for a lower level of development than would be allowed as described under the park's General Management Plan. The number of campsites is expected to remain similar and parking area will be slightly reduced.

4.1.3 Geological Resources - Soils

Most of the development occurs in nearly level topography and generally slopes to the north away from the river. The steepest slopes occur at the bank of the river. Control of soil erosion during and after construction is expected to protect water quality in the river. Erosion control blankets and seeding of exposed soils where appropriate will be used to control erosion. One to three water bars may be installed at the site of the Wayside Rest landing to control future erosion. Use of silt barriers during construction will limit or eliminate siltation into the river and aquatic fauna should not be affected unless an extreme storm event occurs. In the event a major storm does occur during the most vulnerable point in construction (maximum exposed disturbed soils), moderate-term, moderate (more likely minor) impacts may impact mussel fauna in the riverbed in a narrow band for 100-200 meters downstream. Minor short-term impacts may occur to other aquatic fauna as they are displaced by sediments. Sediment deposition would be expected to minor and transitory, dispersing with the next flood, the following spring being the longest term. Long-term beneficial

impacts are expected to occur as erosion potential will be reduced through replacement and revegetation of an eroding landing with a landing with less erosion potential. Impacts due to erosion and/or siltation are expected to be minor and short or moderate-term, lasting mainly during the construction period but up to a year or two for seeded vegetation to cover exposed soils.

Compaction of soils is expected where parking and driving surfaces occur. Compacted soils under existing paved areas where rehabilitated will in time, loosen through invasion by roots and burrowing animals. Soils under some paved areas will be broken up to aid in restoration to native vegetation. Compaction impacts are minor and long-term but both beneficial and adverse, and approximately equal to each other.

4.1.4 Air Quality, Traffic And Noise

Short-term minor impacts are expected to air quality during demolition and construction. Noise and traffic will be temporarily increased during this project. A beneficial, long-term, moderate impact will occur due to screening campsites and the landing from the noise of traffic on State highway 35.

4.1.5 Water Quality

There is a potential for short-term minor impact to water quality due to sedimentation and runoff. See section 4.1.3 above. In accordance with the Clean Water Act, appropriate project design using best management practices will be employed to reduce erosion and sedimentation. Long-term impacts are expected to be negligible or beneficial through elimination of an eroding landing. Thus, the proposal will be in compliance with the Clean Water Act.

A Section 404 permit will be required from the US Army Corps of Engineers for construction of the boat ramp. Despite the use of state of the art sedimentation barriers, there is potential for an adverse, short to moderate-term, minor impact to water quality lasting during construction due to sedimentation.

4.1.6 Streamflow, Land Use, and Land Values

No impacts are expected in these categories, individually, cumulatively, directly or indirectly.

4.1.7 Floodplains

There should be no adverse effect on floodwaters or flood elevations. By their nature, canoe accesses and boat landings on rivers can only be located within a floodplain. These facilities will be constructed in a manner that will minimize or eliminate damage due to flooding and will not have adverse effects upon floodwaters or flood elevations. Thus, the National Park Service is in compliance with the intent of Executive Order 11988 (Floodplain Management).

4.1.8 Wetlands

No wetlands exist within the project site except those contained within the bed of the river. Construction of a landing is not expected to impact wetlands at this site. Thus, the National Park Service will be in compliance with the intent of Executive Order 11990 (Protection of Wetlands).

4.1.9 Vegetation

Large trees at the Wayside Rest were surveyed resulting in a map of the area showing the distribution of all trees larger than 12 inches in diameter. Based upon the drawing of the Preferred Alternative, approximately 27 trees in this category will be cut and removed. This includes one white spruce (*Picea abies*), three aspen (*Populus tremuloides*) and 23 pine (*Pinus strobus* and *P. resinosa*). The exact number of impacted trees will vary depending upon final architectural drawings and implementation of construction. This is considered to be a moderate adverse impact that will eventually (10-20+ years) before being planted trees grow to mature sizes.

Riverside Landing and the abandoned driveway north of the Wayside will be planted with native grasses, forbs, shrubs and trees. Most areas currently managed as turf will be planted with these combinations resulting in an increase in native vegetation. This is considered to be moderate-term and long-term moderate beneficial impact to the vegetation.

4.1.10 Threatened, Endangered and Rare Species

Known terrestrial federally listed species in the region include the bald eagle and gray wolf. Known active bald eagle nests are at least 1.8 miles from the proposed project. These eagles are unlikely to be affected by project construction. This project is within guidelines for activities as set forth by the Northern States Bald Eagle Recovery Plan. Due to screening and distance, this project is unlikely to impact bald eagles. Gray wolves have been reported to den within two miles of Riverside. Although tracks in winter show that wolves have passed through the immediate area, it is not expected that construction will affect the resident wolf pack as they are already accustomed to human activity at this site. In addition, the construction will take place at time when human activity is already common at the site. Snowmobiles users occasionally use the existing parking lot at Riverside Landing and this lot will be eliminated. Assuming wolves may be stressed by the presence of snowmobiles, there is a potential long-term, minor, beneficial impact upon this species through a possible reduction of snowmobiles on National Park Service property. Thus, there should be no adverse impact to any federally-listed species as a result of this project.

A 1992-1993 field survey for rare plants in the Riverway found no state or federally listed species in the proposed project or surrounding area and the area was generally considered unlikely to contain rare species. A field check for rare or listed plant species was conducted within the proposed project area by a National Park Service biologist in spring of 2001. No rare or state or federally listed plant species were located at or in close proximity to the proposed project area. There should be no effect on any state or federally-listed or federally-proposed species. Implementation of any of the alternatives is therefore in compliance with the Endangered Species Act of 1973, as amended.

In keeping with NPS policy, the project has been designed to avoid impact to state-listed plants or animals. There should be no adverse effect to any state-listed or state-proposed plant or animal species.

4.1.11 Wildlife

There should be no adverse impact to either large or small vertebrate species, including competition

for nesting or breeding sites. Some mature trees will be cleared for the redesigned parking lots and roads. This thinning of the trees and simultaneous termination of management for turf grasses will likely encourage understory growth of shrubs and herbaceous ground cover resulting in a more diversified habitat leading to minor changes of vertebrate species. Native plantings in previously developed areas will also lead to a greater diversification of plant species at the project site. However, some small ground dwelling vertebrates and invertebrate species may be disturbed and dislocated to adjacent sites. This impact is expected to be short-term lasting approximately three months during construction. Impacts over a moderate time period (1-3 years) will occur as animals are displaced. Overall long-term impact is considered negligible or beneficial as new habitat becomes available through revegetation of the mowed areas. Although vertebrate and invertebrate species of the site have not been surveyed, no long-term (greater than three years) adverse impact is anticipated.

4.1.12 Exotic Species

Spotted knapweed is present within the proposed development area. This invasive exotic plant easily invades disturbed areas that also have plenty of sunshine. It is common to abundant within the Riverway in abandoned fields, landings, campsites and some mowed lawns and trails. A small number of plants are located adjacent to the Wayside canoe ramp. It is likely that these plants and associated soils (and hence the seed bank) will be moved/removed through construction of the proposed accessible platform and walkway. Larger populations of this plant are present in the open areas within the northern third of the proposed parking lot. As this plant easily invades disturbed soils, out-competes with native plants, and disrupts native plant communities, it is important to prevent the spread of this species. Impacts, beneficial or adverse are considered to be minor in any case as the plant is already common in parts of this site. Mitigation for this exotic plant includes: 1) The use of sediment barriers for soil erosion should also prevent the spread of seeds into the river. 2) Native vegetation and turf grasses where appropriate, will be planted to compete with knapweed. 3) Soils known to contain knapweed seeds will not be distributed to uninfested areas. 4) All flowers and/or seed heads will be removed and destroyed prior to construction. 5) Resource Management staff from the National Park Service will monitor the site following construction and mechanically remove any knapweed before it becomes established within the developed areas. Mitigation efforts will have a long-term beneficial impact through the removal of two or three populations of spotted knapweed.

4.1.13 Recreation And Visitor Use

A beneficial long-term impact is expected upon recreational use through more aesthetically pleasing campsites that are screened from the bridge and a reduction of traffic noise heard at those sites compared to the present location. This screening will consist of a combination of trees, shrubs and ground vegetation. It is expected that this screen will develop in 5-10 years after planting.

No specific parking for snowmobiles will be provided at Riverside. Use of parking at this site has been considered unnecessary by a local snowmobile club. Therefore impacts to recreation and visitor use is expected to be long-term but negligible.

Drinking water and access by small boats on trailers will be provided. Also a walkway and

platform will be provide an accessible means from the parking area to the water for the National Park Service's popular Rivers Are Alive program.

The proposed project will provide access to existing recreational opportunities for Riverway visitors that could enhance their experience in visiting the St. Croix National Scenic Riverway. Signs and notices at the bulletin board will provide an opportunity to orient and educate visitors and thus increase appreciation for the Riverway and reduce unauthorized uses of the area.

4.1.14 Archeological, Historical and Cultural Resources

Because of the potential for archeological resources in the area, a field survey of the project area was conducted in 2001 by a qualified archeologist. Results of this survey concluded that there is a significant Middle to Late Woodland and early Historic site on the property. Materials recovered suggest that the site should be considered eligible for listing on the national Register of Historic Places (NPS, Midwest Archeological Center Memorandum, 12/21/2001). A preliminary report further recommends that development should protect the site from impacts due to construction, landscaping and visitor use. The preferred alternative was designed to the extent possible to avoid impacts to known archeological resources. Both construction and visitor use areas have been located away from the known archeological sites. The area visitor use development is being limited to, has seen previous development. It is unknown however, if the current paved areas cover any archeological resources. It is possible that additional archeological sites might be disturbed during site development and an archeologist will be required to be present during ground disturbance to salvage any resources that might be found. To prevent long-term impacts due to visitor use, a fence will be installed to direct visitors away from archaeological resources. This fence is a direct result of a request received during internal scoping from St. Croix Chippewa Indians of Wisconsin. Additional protective measures will be taken as needed to comply with requests from the Wisconsin State Historical Preservation Office. The result is that there may be a minor impact but no adverse impact to archeological resources. Through protection and data recovery if needed, the National Park Service will be in compliance with the National Historic Preservation Act with little if any loss of data or resources.

4.1.15 Socioeconomics, Low Income and Minority Populations, Ethnography

There are no expected effects on the socioeconomic status of the region, to low income populations or to minority populations as a result of the project development.

4.1.16 Scenic Resources

A beneficial long-term impact (in this case, greater than five years) is expected to the scenic values of the Riverway. Views of parking lots and campsites will be screened with native vegetation from both the river and the Highway 35 bridge. In addition, visitor safety will be improved by eliminating the need to cross the highway to access drinking water.

4.1.17 Concerns Raised Through Public Scoping

Two concerns were raised by members of the public during the public scoping. A concern received during public scoping was to prevent "over-doing construction." Further communication with this person where potential construction was described brought no

further comments. Another concern was raised regarding the potential impacts to archeological resources. This organization requested that a fence be installed to direct visitors away from potentially impacting resources. This fence will be installed but is not shown in the figures as its exact location will be determined prior to construction. This alternative will satisfy concerns raised by the public during scoping.

4.2 Impacts of Alternative 1

The definitions of impacts are above in section 4.1.1. The impacts of Alternative 1 are expected to be the same as the Preferred Alternative with the following exceptions:

4.2.1 Geological Resources - Soils

Potential for soil erosion and sediment input to the river is higher in this alternative due to potential visitor access along the steep banks. These impacts are likely to be short-term and negligible but may be cumulatively more significant when combined with other natural or human caused erosion and sedimentation on the river. If erosion occurs, signing or fencing to keep visitors out, or installation of steps may be required to prevent impacts from becoming cumulatively significant.

4.2.2 Vegetation

More large trees, 12 inches in diameter and larger, will be removed in this alternative. Based upon the drawing of this alternative, approximately 59 trees in this category will be cut and removed. This includes two white spruce, three aspen, two black oak (*Quercus velutina*) and 52 pine. The exact number of impacted trees will vary depending upon final architectural drawings and implementation of construction.

4.2.3 Exotic Species

Potential for spotted knapweed expansion is greater in this alternative due to the increased development area. Although mitigation includes mechanical removal, a larger area increases the chance that individual plants are missed. Assuming mechanical removal is completely successful, there should be a long-term beneficial impact as 2-3 populations of knapweed will be removed.

4.2.4 Recreation And Visitor Use

Possible beneficial impacts are expected upon the recreational use of the Riverway through the addition of campsites available for visitors.

4.2.5 Archeological, Historical and Cultural Resources

There is expected to be an impact to prehistoric and historical resources due to construction of additional campsites and increased use by campers. Because of the widespread locations of cultural items found, limited areas are available for locating camping sites that will not impact the archeological resources. These impacts will be through bank erosion due to campers accessing the river and through direct impacts at the campsite and parking areas. Diversion of visitors from other sensitive areas will be through use of fencing and trails but is not expected to completely eliminate impacts as visitors strive to take the most direct route to access the river. Impacts will require mitigation, possibly through an archeological excavation of all potentially impacted areas. This mitigation could be costly, removing funds from other parts of this development.

4.3 Impacts of Alternative 2

The definitions of impacts are above in section 4.1.1. The impacts of Alternative 2 are expected to be the same as the Preferred Alternative with the following exceptions:

4.3.1 Geological Resources - Soils

The largest area of compacted soils will be rehabilitated in Alternative 2. Compacted soils under existing paved areas where rehabilitated will in time, loosen through invasion by roots and burrowing animals. Compaction impacts are long-term but both beneficial and adverse, and approximately equal to each other.

4.3.2 Air Quality, Traffic And Noise

Short-term minor impacts are expected to air quality during demolition and construction. Noise and traffic will be temporarily increased during this project. A beneficial, long-term, moderate impact will occur due to screening campsites and the landing from the noise of traffic on State highway 35. Noise, traffic and impacts to air quality from snowmobiles at parking areas on National Park Service property may be reduced resulting in a beneficial, long-term, minor impact.

4.3.3 Vegetation

Large trees at the Wayside Rest were surveyed resulting in a map of the area showing the distribution of all trees larger than 12 inches in diameter. Based upon the drawing of the Preferred Alternative (same as Alternative 2), approximately 27 trees in this category will be cut and removed. This includes one white spruce (*Picea abies*), three aspen (*Populus tremuloides*) and 23 pine (*Pinus strobus* and *P. resinosa*). The exact number of impacted trees will vary depending upon final architectural drawings and implementation of construction. This is considered to be a moderate, adverse impact that will eventually diminish (10-20+ years) by being replaced by planted trees.

Riverside Landing and the abandoned driveway north of the Wayside will planted with native grasses, forbs, shrubs and trees. Most areas currently managed as turf will be planted with these combinations resulting in an increase in native vegetation. This is considered to be a beneficial moderate- and long-term moderate impact to the vegetation.

4.3.4 Threatened, Endangered and Rare Species

Gray wolves have been reported to den within two miles of Riverside. Although tracks in winter show that wolves have passed through the immediate area, it is not expected that construction will affect the resident wolf pack as they are already accustomed to human activity at this site. In addition, the construction will take place at time when human activity is already common at the site. The proposed smaller lot will limit snowmobile use at this site to no more than current levels.

4.3.5 Recreation And Visitor Use

A small parking area for snowmobiles will be retained at Riverside Landing. No change in the number of visitors is expected. No impact upon recreation and visitor use is expected as a result of this change.

4.3.6 Concerns Raised Through Public Scoping

A concern received during public scoping was to prevent "over-doing construction." Further communication with this person where potential construction was described brought no further comments. Elimination of the parking area further reduces construction at Riverside and should satisfy this comment.

4.4 Impacts of No Action Alternative

The definitions of impacts are above in section 4.1.1. There will be little or no impacts under this alternative. However, if a lack of improvement can be considered an adverse impact, then adverse impacts will occur to visitor enjoyment of the river. The following sections describe impacts due to no action taken.

4.4.1 Geological Resources - Soils

Soils and water quality are both expected to be impacted through erosion of the existing landing at the wayside. Adverse impacts to water quality are considered to be minor and localized, however, they may be cumulatively more significant when combined with other natural or human caused erosion and sedimentation on the river.

4.4.2 Air Quality, Traffic And Noise

The existing campsites are impacted visually and by noise of traffic on Highway 35. Traffic on Highway 35 is likely to increase with the growing population in northwestern Wisconsin, thus increasing this impact in the future.

4.4.3 Threatened, Endangered and Rare Species

Studies in Voyageurs National Park suggest that wolves may be more stressed when subjected to noise of snowmobiles. Use of the Riverside Landing for snowmobile trailhead parking could significantly increase given the capacity at the current parking area. There is a potential for an adverse, long-term, minor to impact to the wolves in the area. Snowmobiles are not allowed on Riverway property or on the frozen surface of the river north of the highway bridge at Riverside. Any effect upon wolves would mainly be limited to areas outside the river and National Park Service property.

4.4.4 Exotic Species

Exotic plants, specifically spotted knapweed, are expected to continue spreading through lack of action in this alternative. Native communities, especially those in full sunlight, are likely to have long-term minor impacts as knapweed out competes for space, water and soil.

4.4.5 Recreation And Visitor Use

Visitor enjoyment will be impacted by traffic noise and visual exposure to State Highway 35 as described under 4.4.2. If drinking water is provided at the wayside in the future, visitors will still have to cross the highway to access it.

4.4.6 Scenic Resources

The scenic resources will continue to be adversely impacted by having two landings located in close

proximity. In addition, the three parking lots will remain visible from the river.

4.5 Regulations and Policies

4.5.1 Endangered Species Act of 1973, as amended

No adverse impacts to listed species are expected as a result of the proposed parking lot construction (USFWS, pers. comm., 2002). Bald eagles nest along the St. Croix River with the nearest nest located approximately 1.8 miles northeast of this site, which places it beyond the recommended buffer zones in the Management Guidelines for Bald Eagle Management, St. Croix National Scenic Riverway (USDI 2001). These guidelines are adapted from the Northern States Bald Eagle Recovery Plan (USDI 1983). The nest is not visible from the Riverside development site.

A pack of gray wolves is known to use the area. No impacts are expected to this pack.

Should rare species be found to occur at, or in close proximity to the proposed development, the project location and/or design will be reevaluated and/or adjusted in consultation with the U.S. Fish and Wildlife Service. If these measures are taken, there should be no adverse impact to any listed or proposed listed plant or animal species.

4.5.2 E.O. 11988 Floodplain Management

Part of this area is subject to flooding and is situated in a floodplain. Parts of the area were inundated during the record flood of spring 2001. This does not include the area where the parking lot, well or the toilets will be installed. By their nature, canoe accesses and boat landings on rivers can only be located within a floodplain. These facilities will be constructed in a manner that will minimize or eliminate damage due to flooding and will not have adverse effects upon floodwaters or flood elevations. Thus, the National Park Service is in compliance with the intent of Executive Order 11988.

4.5.3 E.O. 11990 Protection of Wetlands

No wetlands exist at this site other than those contained within the bed of the river. These will not be affected.

4.5.4 National Historic Preservation Act and E.O. 11593

Because of a potential for archeological resources in the project area, a compliance related field survey was conducted in 2001 by a qualified NPS archeologist. Results of this survey concluded that there is a significant Middle to Late Woodland and early Historic site on the property. Materials recovered suggest that the site should be considered eligible for listing in the national Register of Historic Places (NPS, Midwest Archeological Center Memorandum, 12/21/2001). This draft report further recommends that development should protect the site from landscaping and visitor use impacts. The preferred alternative was designed to leave significant archeological resources intact and direct visitor use away from sensitive areas. Archeological excavation may be required to mitigate impacts if additional archeological resources are found during construction. Thus, the National Park Service will be in compliance with the National Historic Preservation Act.

4.5.5 Architectural Barriers Act of 1968 and the Rehabilitation Act of 1973

An accessible walkway, ramp and pad will be constructed between the parking area and the canoe access point at the day use and campsite area. Other accessible facilities include the vault toilets, drinking water, picnic tables and grills. Reasonable accommodations will be made to the extent possible.

4.5.6 Wild and Scenic River Act of 1968

Impacts to a Wild and Scenic River could include impacts to those resources for which the Riverway was established. These include scenic, recreational, geologic, fish and wildlife, historic or cultural resources. Scenic and recreational resources are expected to be beneficially affected. No impact is expected upon geologic, fish or wildlife resources. Potential adverse impacts to historic resources exist but will be eliminated through proper planning, siting of facilities, and care during construction. If these measures are followed, there should be no impacts to a Wild and Scenic River.

4.6 Summary Table of Environmental Consequences

TABLE 3: SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Impact Topic	**Preferred Alternative:** New Parking Design, New Landing, New Facilities	**Alternative 1:** Drive-in Campsites, New Parking Design and Rehabilitation Of Existing Facilities.	**Alternative 2:** New Parking Design, New Landing, New Facilities, Parking Area Reduced At Riverside Landing	**No Action Alternative:** Duplication Of Facilities, Scenic And Recreational Impacts Remain, No Drinking Water
Geological Resources - Soils	Long-term minor impacts to soils removed, compacted during construction, or covered by pavement. Beneficial long-term impacts through reduction of erosion.	Long-term minor impacts to soils removed, compacted during construction, or covered by pavement. Potential for adverse impacts through erosion by social trails to access the river. Beneficial long-term impacts through reduction of erosion.	Long-term minor impacts to soils removed, compacted during construction, or covered by pavement. Beneficial long-term impacts through reduction of erosion.	Minor impact as soil is eroded from current landing area at the wayside.
Air Quality	Short-term minor impacts during demolition and construction.	Short-term minor impacts during demolition and construction.	Short-term minor impacts during demolition and construction.	Negligible or no impact.
Traffic & Noise	Short-term moderate impacts due to noise and traffic during construction. Long term beneficial impacts from noise due to screening and distancing from the highway.	Short-term moderate impacts due to noise and traffic during construction. Long term beneficial impacts from noise due to screening and distancing from the highway.	Short-term moderate impacts due to noise and traffic during construction. Long term beneficial impacts from noise due to screening and distancing from the highway.	Long-term impact from traffic and noise upon visitors at campsites.
Water Quality	Long-term beneficial impact due to reduction of erosion at landings.	Long-term beneficial impact due to reduction of erosion at landings.	Long-term beneficial impact due to reduction of erosion at landings.	Minor impact due to erosion at existing landing until future rehabilitation.
Streamflow	No impact.	No impact.	No impact.	No impact.
Floodplains	No impact	No impact.	No impact	No impact.
Wetlands	No impact.	No impact.	No impact.	No impact.
Land Use, Land Values	No impact.	No impact.	No impact.	No impact.
Vegetation	Adverse impacts through removal of approximately 27 trees at least 12" in diameter. Beneficial long-term impacts through planting of native plants and conversion of large areas of	Adverse impacts through removal of approximately 59 trees at least 12" in diameter. Beneficial long-term impacts through planting of native plants and conversion of large areas of	Adverse impacts through removal of approximately 27 trees at least 12" in diameter. Beneficial long-term impacts through planting of native plants and conversion of large areas of	No impact.

Impact Topic	**Preferred Alternative:** New Parking Design, New Landing, New Facilities	**Alternative 1:** Drive-in Campsites, New Parking Design and Rehabilitation Of Existing Facilities.	**Alternative 2:** New Parking Design, New Landing, New Facilities, Parking Area Reduced At Riverside Landing	**No Action Alternative:** Duplication Of Facilities, Scenic And Recreational Impacts Remain, No Drinking Water
	turf grasses to native ground cover species and understory trees and shrubs.	turf grasses to native ground cover species and understory trees and shrubs.	turf grasses to native ground cover species and understory trees and shrubs.	
Threatened, Endangered and Rare Species	No impact.	No impact.	No impact.	No impact.
Wildlife	Short-term adverse impacts due to displacement of small animals. Long-term beneficial impact due to expansion of native habitat for birds and other small animals.	Short-term adverse impacts due to displacement of small animals. Long-term beneficial impact due to expansion of native habitat for birds and other small animals.	Short-term adverse impacts due to displacement of small animals. Long-term beneficial impact due to expansion of native habitat for birds and other small animals.	No impact.
Exotic Species	Beneficial long-term minor impact as two small spotted knapweed populations are removed or controlled.	Beneficial long-term minor impact as two small spotted knapweed populations are removed or controlled.	Beneficial long-term minor impact as two small spotted knapweed populations are removed or controlled.	Adverse long-term minor impact as two small spotted knapweed populations are not removed or controlled.
Recreation / Visitor Use	Beneficial impact through the addition of a landing that will accommodate small boats on trailers. Beneficial impact on visitors using campsites due to reduced traffic noise and lights. Short-term adverse impact due to closure of Wayside during construction. Improved access to drinking water.	Beneficial impact on visitors using campsites due to reduced traffic noise and lights. Short-term adverse impact due to closure of Wayside during construction. Long-term beneficial impact due to addition of boat ramp, more campsites and drive-in access. Improved access to drinking water.	Beneficial impact through the addition of a landing that will accommodate small boats on trailers. Beneficial impact on visitors using campsites due to reduced traffic noise and lights. Short-term adverse impact due to closure of Wayside during construction. Improved access to drinking water.	Long-term, localized adverse impact at the existing campsites and landing from noise and lights of traffic. Lack of safe access to drinking water.
Prehistoric Resources	Potential for minor long-term adverse impact due to soil disturbance from visitor use. Impact will be limited or eliminated by use of fencing, signage and trail construction to divert visitor foot traffic.	Potential for minor long-term adverse impact due to soil disturbance from visitor use. Impact will be limited by use of fencing, closure signs and trail construction but their effectiveness in limiting impact is	Potential for minor long-term adverse impact due to soil disturbance from visitor use. Impact will be limited or eliminated by use of fencing, signage and trail construction to divert visitor foot traffic.	Little or no impact.

Impact Topic	**Preferred Alternative:** New Parking Design, New Landing, New Facilities	**Alternative 1:** Drive-in Campsites, New Parking Design and Rehabilitation Of Existing Facilities.	**Alternative 2:** New Parking Design, New Landing, New Facilities, Parking Area Reduced At Riverside Landing	**No Action Alternative:** Duplication Of Facilities, Scenic And Recreational Impacts Remain, No Drinking Water
		questionable. Construction of developed components would require archeologists to further survey and/or excavate to mitigate impact to archeological resources.		
Historic Resources	Potential for minor long-term adverse impact due to soil disturbance from visitor use. Impact will be limited or eliminated by use of fencing, signage and trail construction to divert visitor foot traffic.	Potential for minor to moderate long-term adverse impact due to soil disturbance from visitor use. Impact will be limited by use of fencing, closure signs and trail construction but their effectiveness in limiting impact is questionable. Construction of developed components would require archeologists to further survey and/or excavate to mitigate impact to archeological resources.	Potential for minor long-term adverse impact due to soil disturbance from visitor use. Impact will be limited or eliminated by use of fencing, signage and trail construction to divert visitor foot traffic.	Little or no impact.
Socio-economics	No impact.	No impact.	No impact.	No impact.
Minority and Low Income Populations	No impact.	No impact.	No impact.	No impact.
Ethnography	No impact.	No impact.	No impact.	No impact.
Scenic Resources	Long-term beneficial impacts due to screening of parking lots and reduction in number of landings.	Long-term beneficial impacts due to screening of parking lots and reduction in number of landings.	Long-term beneficial impacts due to screening of parking lots and reduction in number of landings.	Long-term, localized adverse impact due to visual intrusion of adjacent landings and parking areas visible from the river.

4.7 Evaluation of Impairment

In managing units of the national park system, the National Park Service may undertake actions that have both beneficial and adverse impacts on park resources and values. However, by the provisions of the laws governing the NPS, the Service is prohibited from taking or authorizing any action that would, or is likely to, impair park resources or values for which the park was established. What follows here is a discussion of evaluation of impairment for each park resource or value that could constitute impairment if adversely impacted.

St. Croix National Scenic Riverway was established for its outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or similar values.

4.7.1 Evaluation of Impairment Due To The Preferred Alternative

- Scenic values are generally referred to those as seen from the water. This project can be seen from the river and will have an effect upon those values. As designed in the preferred alternative, evidence of human presence and development as seen from the river will be reduced through removal of visible facilities and through vegetative screening. This project will not derogate the scenic value of the Riverway.
- Recreational values include boating and activities associated with boating, use of trails, and other land based activities such as hiking, hunting and fishing. Access to the river for boating and camping will likely be improved by this project. This project will not derogate these activities.
- Geologic values include glacial and river landforms such as islands, sandbars, floodplains, glacial river terraces and valleys, and other evidence of glaciation. This project will not affect any geologic landform.
- Fish and wildlife values include terrestrial and aquatic life forms. Erosion prevention should improve current conditions and thus improve conditions for aquatic life forms. A small number of terrestrial animals will be displaced or removed but the numbers are considered insignificant. Native vegetation will be used to replace non-native exotic species providing improved and expanded habitat for terrestrial species. There will not be a derogation of fish and wildlife values at this site.
- Historic and cultural values include prehistoric and historic evidence of human occupation at the site as well as ethnographic affiliation to the site. While the archeological site in the area of the wayside should be considered significant, siting of development under the preferred alternative will protect the remaining intact portion from adverse impacts. There may be minor impacts but no adverse impacts are expected to the archeological resources. The area is not known to be a sacred site or have other special importance to any ethnic groups. This project will not cause a derogation of historic or cultural values.

Therefore, according to the above statements, no scenic, recreational, geologic, fish or wildlife, historic or cultural, or other similar values will be impaired by this project as proposed in the Preferred Alternative.

4.7.2 Evaluation of Impairment Due To Alternative 1

- Scenic values are generally referred to those as seen from the water. This project can be seen

from the river and will have an effect upon those values. As designed in Alternative 1, evidence of human presence and development as seen from the river will be reduced through removal of visible facilities and through vegetative screening. This project will not derogate the scenic value of the Riverway.

- Recreational values include boating and activities associated with boating, use of trails, and other land based activities such as hiking, hunting and fishing. Access to the river for boating and camping will likely be improved by this project. This project will not derogate these activities.
- Geologic values include glacial and river landforms such as islands, sandbars, floodplains, glacial river terraces and valleys, and other evidence of glaciation. This project will not affect any geologic landform.
- Fish and wildlife values include terrestrial and aquatic life forms. Erosion prevention and reduction should improve current conditions and thus improve conditions for aquatic life forms. A small number of terrestrial animals will be displaced or removed but the numbers are considered insignificant. Native vegetation will be used to replace non-native exotic species providing improved and expanded habitat for terrestrial species. There will not be a derogation of fish and wildlife values at this site.
- Historic and cultural values include prehistoric and historic evidence of human occupation at the site as well as ethnographic affiliation to the site. While the archeological site in the area of the wayside should be considered significant, siting of development under Alternative 1 will protect the remaining intact portion from adverse impacts through mitigating efforts of recovery. There may be minor impacts but no adverse impacts are expected to the archeological resources. The area is not known to be a sacred site or have other special importance to any ethnic groups. This project under Alternative 1 will not cause a derogation of historic or cultural values.

4.7.3 Evaluation of Impairment Due To Alternative 2

- Scenic values are generally referred to those as seen from the water. This project can be seen from the river and will have an effect upon those values. As designed in Alternative 2, evidence of human presence and development as seen from the river will be reduced through removal of visible facilities and through vegetative screening. This project will not derogate the scenic value of the Riverway.
- Recreational values include boating and activities associated with boating, use of trails, and other land based activities such as hiking, hunting and fishing. Access to the river for boating and camping will likely be improved by this project. This project will not derogate these activities.
- Geologic values include glacial and river landforms such as islands, sandbars, floodplains, glacial river terraces and valleys, and other evidence of glaciation. This project will not affect any geologic landform.
- Fish and wildlife values include terrestrial and aquatic life forms. Erosion prevention should improve current conditions and thus improve conditions for aquatic life forms. A small number of terrestrial animals will be displaced or removed but the numbers are considered insignificant. Native vegetation will be used to replace non-native exotic species providing improved and expanded habitat for terrestrial species. There will not be a derogation of fish and wildlife values at this site.

- Historic and cultural values include prehistoric and historic evidence of human occupation at the site as well as ethnographic affiliation to the site. While the archeological site in the area of the wayside should be considered significant, siting of development under Alternative 2 will protect the remaining intact portion from adverse impacts. There may be minor impacts but no adverse impacts are expected to the archeological resources. The area is not known to be a sacred site or have other special importance to any ethnic groups. This project under Alternative 2 will not cause a derogation of historic or cultural values.

4.7.4 Evaluation of Impairment Due No Action Alternative.

- Scenic values are generally referred to those as seen from the water. This project can be seen from the river and will have an effect upon those values. The No Action Alternative will retain impacts due to duplicity of landings and parking lots visible from the river. This project will not derogate the scenic value of the Riverway, but does not reduce impacts.
- Recreational values include boating and activities associated with boating, use of trails, and other land based activities such as hiking, hunting and fishing. The No Action Alternative will not derogate these activities.
- Geologic values include glacial and river landforms such as islands, sandbars, floodplains, glacial river terraces and valleys, and other evidence of glaciation. The No Action Alternative will not affect any geologic landform.
- Fish and wildlife values include terrestrial and aquatic life forms. Erosion and runoff at Riverside Wayside canoe launch will continue and could have a negligible to minor impact upon aquatic animals. However, this is not considered a permanent impact as remedial action will likely take place in the future. Therefore, there will not be a derogation of fish and wildlife values at this site due to the No Action Alternative.
- Historic and cultural values include prehistoric and historic evidence of human occupation at the site as well as ethnographic affiliation to the site. While the archeological site in the area of the wayside should be considered significant, the No Action Alternative will likely protect the remaining intact portion from adverse impacts. There may be minor impacts but no adverse impacts are expected to the archeological resources. The area is not known to be a sacred site or have other special importance to any ethnic groups. The No Action Alternative will not cause a derogation of historic or cultural values.

Therefore, according to the above statements, no scenic, recreational, geologic, fish or wildlife, historic or cultural, or other similar values will be impaired by this project as proposed in the No Action Alternative.

5.0 EA CONSULTATIONS

A press release written to solicit input and ideas for this project was sent to the National Park Service's media list and partners list. These lists include government entities, newspapers, television and radio stations within and adjacent to the St. Croix National Scenic Riverway and the Minneapolis-St. Paul region. The press release contained a description of possible changes proposed at the site and a description of the site. Both the press release and an included cover letter requested input regarding this project. Only two responses were received, both by telephone. One

respondent gave information regarding a former Civilian Conservation Corp possibly located at the site. The second respondent expressed concern about "over-doing construction" at landings.

Internal scoping took place through staff meetings that addressed criteria desired for the project. A National Park Service Landscape Architect from the Midwest Regional Office used these criteria to design possible arrangements of facilities. Further meetings reviewed submitted designs to produce preferred alternatives and recommendations for changes. Three alternative drawings were reviewed with one sent back for modification. This alternative was further modified following recommendations from archaeologists at the NPS Midwest Archeological Center, Lincoln, Nebraska. In addition, during consultation, the St. Croix Chippewa Indians of Wisconsin requested a fence be installed to prevent impacts to archeological resources. This fence was incorporated into all alternatives except the No Action Alternative.

A draft of this environmental assessment (EA) was reviewed by the Endangered Species Coordinator, US Fish and Wildlife Service, Green Bay Field Office, Green Bay, Wisconsin. The draft EA included data regarding local gray wolf and bald eagle distribution and nesting data.

This draft of this environmental assessment (EA) was also reviewed by the Midwest Regional Office, National Park Service, in Omaha, Nebraska. Their comments led to considerable changes, though none changing the proposals, methods, or impacts.

The draft of this environmental assessment (EA) was also reviewed by Wisconsin State Historical Preservation Office, Madison, Wisconsin.

This environmental assessment was prepared by an Interdisciplinary Team of the St. Croix National Scenic Riverway including:

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7.0 APPENDIX A

7.1 Design Criteria Submitted to National Park Service Midwest Region Landscape Architect

1. LANDING: Provide a launch area on the site that could accommodate canoes as well as fishing boats on trailers. Most of the use is expected to be from canoeists. The primary motor boat use is from small fishing boats. If an adequate boat launch was provided at Riverside, an informal launch area downstream could be closed. This launch may also become a fire truck water filling area.
2. PARKING CAPACITY: Parking lot(s) should accommodate 10 oversize vehicle/trailers and the current 36 parking slots. Parking at the NPS landing would be reduced from 20 to 5 slots for snowmobile trailhead parking and use for bus transfers.
3. RESTROOM: Ideally, the existing facility would be rehabilitated or replaced. The existing size of the restroom is adequate but complaints include: it smells in summer; it is dark and dingy; the vault needs to be checked for leaks.
4. POTABLE WATER: The existing well does not meet NPS standards, will need chlorinating, and the hand pump will need to be replaced with a submersible pump. A well house will need to be constructed. The well could be relocated and/or water could be pumped to a maximum of 3 drinking fountains to serve the various activities at the site.
5. PICNIC AREA: Provide a day use area with 4-5 picnic tables and 3 raised grills. No picnic

shelter will be necessary.

6. EDGE DELINEATION: The existing wood posts lining the drives should be removed. Curbs and gutters can be use to control drainage or mark the edges of roadways and parking areas.
7. CAMPING: Relocate the existing campsites at the current NPS site across the highway and relocate them into the general area of the adjacent National Park Service land (6 campsites). This will eliminate a safety issue of campers having to cross the highway to access drinking water at the wayside. The existing sites would be restored with native vegetation. Campsites should include a picnic table and a fire ring. Campsites should be within view of their vehicle but visitors should expect to walk a short distance to their campsite. If possible, 2-3 sites will be clustered for use by larger groups. Space should be allowed for possible future self-serve registration kiosk and a possible camp host site. The camping area design should consider the needs of visitors in the following scenarios: camping and then starting their trip in the morning; visitors taking out and camping the night before going home the next day; and visitors canoeing down river, spending the night and then continuing their trip.
8. ENVIRONMENTAL ISSUES: Although no environmental issues were originally delivered to the landscape architect, existing and potential erosion at the current boat launch needed to be addressed. It was suggested to move the launch downstream to the location used prior to WisDOT ownership. In addition, an archaeological survey revealed potential sites that needed to be considered. Other issues raised included: minimize the impact on undisturbed areas (leave as many trees as possible); pull back parking as much as possible from the river's edge and have a vegetative screen from the river.
9. TRASH COLLECTION: No trash or recycling receptacles should be provided following the National Park Service's carry-in carry-out policy.
10. WISCONSIN DEPARTMENT OF TRANSPORTATION: There will be a 100' Right-of-way from the centerline of the highway into the property. It will require a turn lane for traffic leaving State Highway 35 into the redesigned site.
11. MISCELLANEOUS: A bulletin board should be near the landing and there should be an area for a three-sided interpretive panel within the site.